

Schumaker & Company



**Proposal
for
New York State Department of Public Service
To Provide a
Management and Operations Audit of
Long Island Power Authority
Matter No. 12-00314**

Submitted by:

**Schumaker & Company, Inc.
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May 30, 2012



May 30, 2012

Records Access Officer
New York State Department of Public Service
Three Empire State Plaza
Albany, New York 12223

Regarding: *Matter No. 12-00314: Management and Operations Audit of Long Island Power Authority*

Schumaker & Company, Inc. (Schumaker & Company) is pleased to submit this proposal in response to *Matter 12-00314* for a consulting firm to perform a comprehensive management and operations audit of the Long Island Power Authority (Authority or LIPA) on behalf of the New York State Department of Public Service (NYSDPS).

Per New York State's Public Officer's Law §87(2)(c), we are requesting that the attached proposal be treated in its entirety as confidential information. We request such exception from public disclosure until the Department of Public Service selects a winning proposal for this investigation. Public disclosure of this proposal prior to selection by the Department would impair present or imminent contract awards for this engagement.

Our team's extensive knowledge and experience with electric, gas, water, and telecommunications firms throughout North America, as well as our work with public and private sector organizations combined with our sophisticated, proven project management techniques and skills, makes our firm well-suited to this project. The qualifications of our firm and consultants have significant merit, as follows:

- ◆ ***Not just any consultant!*** – This is probably the only proposal that you will receive where the *Engagement Manager* and *Project Manager* are *Certified Management Consultants* (CMC®s). CMC®s are certified by the Institute of Management Consultants USA (IMC USA), an ISO/IEC 17024 certifying body for its CMC® certification process, which confirms a consultant's education, continuing professional development, and commitment to highest ethical standards. IMC USA's examiners rigorously assess the consulting engagements and competence of applicants and their ability to apply the knowledge and skills defined in IMC USA's competency framework and certification scheme. This certification mark represents evidence of the highest standards of consulting and adherence to the ethical canons of the profession. Less than 1% of consultants have achieved this level of performance. As our officers are CMC®s, we ensure that our consultants abide by IMC USA's code of ethics, which is included following this letter. Also our *Engagement Manager* and two other consultants are or *Certified Public Accountants* (CPAs).
- ◆ ***Project management expertise*** – Schumaker & Company has significant background and experience in managing projects. Our President, Patricia Schumaker, is certified as a *Project Management Professional* (PMP) by the Project Management Institute (PMI); therefore, we adhere to the principles of PMI's *Project Management Body of Knowledge* (PMBOK) in the conduct of projects. We have our proprietary *Project Management Information Application* for managing and reporting the progress and results of our engagements in a logical and efficient manner, which we will use for this project.



- ◆ ***Extensive state regulatory experience*** – Schumaker & Company consultants have conducted over 120 utility consulting assignments for more than 33 state regulatory commissions. As such, we have a strong working knowledge of the issues that concern these agencies. Specifically, Schumaker & Company has completed examination and evaluation of utility practices for public service commissions, including (but not limited to) those areas identified in the RFP. Based on the specific requirements of this project, we have staffed our project team with consultants having expertise in these areas. As these investigations focus on very specialized areas of expertise, we believe that they are best handled by consultants who are experienced in those areas.
- ◆ ***Recent relevant utility industry experience*** – Schumaker & Company assignments have involved all sectors of the utility industry, including work for regulators, municipalities, utilities, and industry and professional associations. We fully appreciate the legal, regulatory, financial, and cultural factors that complicate planning and operations in the utility industry's competitive environment. As such, we have a strong working knowledge of challenges that organizations in the utility industry face. We have a proven track record for successfully completing similar assignments to this one.
- ◆ ***Technology expertise*** – In addition to our extensive business backgrounds, our project team has direct hands on experience in providing, developing, and supporting computer technologies. Many of our consultants are certified in various technologies, including *Microsoft Certified Professionals* (MCPs), *Microsoft Certified System Engineers* (MCSEs), and *Microsoft Certified Systems Administrators* (MCSAs). Schumaker & Company is also a *Microsoft Channel Partner*. This combined knowledge base of technology, along with operations and management issues, makes our firm uniquely qualified for the most complex and demanding assignments. Our corporate culture is fast moving, technologically advanced, and readily adapted to meet a variety of client needs.
- ◆ ***Best practices and benchmarking*** – We work on the principle that organizations can chart a course to superior economic performance by studying the best business practices, operating tactics, and winning strategies of industry competitive organizations. Clients must understand their strategic intent, and identify core competencies, key business processes, and critical success factors. The choice of organization(s) to compare with is key and dependent on several factors. Requirements must be established for selecting benchmarking partners, given the benchmarking objective, or for characterizing the degree of relevance that any particular company may have as a potential benchmarking partner. Our benchmarking process includes executive interviews and custom studies to identify gaps, develop solutions, grow revenues and profits, and provide recommendations.
- ◆ ***Efficient approach*** – We have structured our overall approach to be straightforward and pragmatic to ensure that the environment in which the project is performed will result in high-quality work products and deliverables.

- ◆ **Proven techniques and client satisfaction** – We have established a reputation for performing outstanding consulting work, which we attribute to our seasoned consultants and full use of leading-edge computer technology for project management, analysis, and communications. We have a proven record for successfully completing similar management and operations review assignments for state and local government entities; telecommunications firms; electric, gas, and water/wastewater utilities; and private sector organizations. Approximately 80% of our projects are for clients with whom we have previously worked. Their willingness and desire to repeatedly work with our firm indicates their satisfaction with our work.
- ◆ **Expert testimony** – As part of their participation on numerous management and operations reviews, Schumaker & Company project team members have provided expert testimony in more than 10 jurisdictions.

All the information in our proposal is accurate, that Schumaker & Company is committed and able to perform all the work contained in our proposal response, that our consulting firm is in compliance with all RFP requirements, and that this proposal, as submitted, is a firm and irrevocable offer valid for at least 180 days from the May 30, 2012 due date. As per the RFP requirements, we have submitted the following proposal documents electronically via email to recordsaccessofficer@dps.ny.gov:

- ◆ Our cover letter and proposal as one PDF file, including our work samples as links
- ◆ Our *Proposal Submission Form* as an Excel file.

In addition, we have composed an e-mail to secretary@dps.ny.gov and the *Project Manager*, Ms. Kristee Adkins, at kristee.adkins@dps.ny.gov that includes, as an attachment, our cover letter only as a PDF file.

As the individual authorized to legally bind Schumaker & Company, I can indicate our willingness to assist NYSDPS and extend our commitment that we will put forth every effort for the successful and timely execution of our scope of work. If you have any questions, please contact me at our headquarters in Ann Arbor, Michigan at (734) 998-5550 (telephone), 734-998-5590 (fax), or solutions@schuco.com (email address). We are excited about the opportunity to work with New York State Department of Public Service and LIPA and hope to hear further from you.

Cordially,



Patricia H. Schumaker, President & Engagement Manager
Schumaker & Company, Inc.

Institute of Management Consultants USA Code of Ethics

All IMC USA members pledge in writing to abide by the Institute's Code of Ethics. Their adherence to the Code signifies voluntary assumption of self-discipline. As the professional association and certifying body for management consultants in the United States, IMC USA requires adherence to this Code of Ethics as a condition of membership and certification. The standards of conduct set forth in this Code provide basic principles in the ethical practice of management consulting. The purpose of this Code is to help IMC USA members maintain their professionalism and adhere to high ethical standards in the conduct of providing services to clients and in their dealings with their colleagues and the public. The individual judgment of Members is required to apply these principles. Members are liable to disciplinary action under the IMC USA Rules of Procedure for Enforcement of this Code if their conduct is found by the IMC USA Ethics Committee to be in violation of the Code or to bring discredit to the profession or to IMC USA. The Code specifies:

CLIENTS

- ◆ Members will serve their clients with integrity, competence, independence, objectivity, and professionalism.
- ◆ Members will mutually establish realistic expectations of the benefits and results of their services.
- ◆ Members will only accept assignments for which they possess the requisite experience and competence to perform and will only assign staff or engage colleagues with the knowledge and expertise needed to serve clients effectively.
- ◆ Members will ensure that before accepting any engagement a mutual understanding of the objectives, scope, work plan, and fee arrangements has been established.
- ◆ Members will treat appropriately all confidential client information that is not public knowledge, take reasonable steps to prevent it from access by unauthorized people, and will not take advantage of proprietary or privileged information, either for use by them, the client's firm, or another client, without the client's permission.
- ◆ Members will avoid conflicts of interest or the appearance of such and will immediately disclose to a client any circumstances or interests that might influence their judgment and objectivity.
- ◆ Members will offer to withdraw from a consulting engagement when their objectivity or integrity may be impaired.
- ◆ Members will refrain from inviting an employee of an active or inactive client to consider alternative employment without prior discussion with the client.

FISCAL INTEGRITY

- ◆ Members will agree in advance with a client on the basis for fees and expenses, and will charge fees that are reasonable and commensurate with the services delivered and the responsibility accepted.
- ◆ Members will not accept commissions, remuneration, or other benefits from a third party in connection with the recommendations to a client without that client's prior knowledge and consent, and will disclose in advance any financial interests in goods or services that form part of such recommendations.

PUBLIC AND THE PROFESSION

- ◆ Members will, if within the scope of an engagement, report to appropriate authorities within or external to the client organization any occurrences of malfeasance, dangerous behavior, or illegal activities.
- ◆ Members will respect the rights of consulting colleagues and consulting firms and will not use their proprietary information or methodologies without permission.
- ◆ Members will represent the profession with integrity and professionalism in their relations with their clients, colleagues, and the general public.
- ◆ Members will not advertise their services in a deceptive manner nor misrepresent or denigrate individual consulting practitioners, consulting firms, or the consulting profession.
- ◆ Members will report violations of this Code to the Institute of Management Consultants USA and will promote adherence to the Code by other member consultants working on their behalf.

The Institute of Management Consultants USA, Inc. (IMC USA) adopted its first Code of Ethics in 1968. Since that time IMC USA has modified the wording of the Code for additional clarity and relevance to clients. The current Code was approved February 3, 2005. It is consistent with the International Code of Professional Conduct published by the International Council of Management Consulting Institute (ICMCI) of which IMC USA is a founding member.

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**APPENDIX C – SCHUMAKER & COMPANY PROJECT MANAGEMENT & BEST
PRACTICES KNOWLEDGEBASE C-1**

I. Introduction

Schumaker & Company, Inc. (Schumaker & Company) is pleased to submit this proposal in response to Matter 12-00314 for a consulting firm to perform a comprehensive management and operations audit of the Long Island Power Authority (the Authority or LIPA). Specifically, as per the request for proposal (RFP), the audit will therefore focus on the following elements for electric distribution and transmission operations:

- ◆ LIPA's construction and capital program planning in relation to the needs of its customers for reliable service
- ◆ The overall efficiency of LIPA's operations
- ◆ The manner in which LIPA is meeting its debt service obligations
- ◆ LIPA's fuel and purchased power cost adjustment clause and recovery of costs associated with such clause
- ◆ LIPA's annual budgeting procedures and process
- ◆ LIPA's compliance with debt covenants

Following a brief overview and introduction to our understanding of the situation are chapters and appendices that provide a description of our approach to services and work plan (including a discussion of our proposed project schedule, project hours, and our project management and administrative techniques), our experience and team qualifications, and our cost proposal for this project.

A. Project Approach

Synopsis of Study

We propose to conduct this audit based on a three-step review process, which has been custom tailored to meet the objectives of the NYSDPS. This process will provide the Schumaker & Company project team with a structured approach that is comprehensive and logical, as well as interactive and participative with NYSDPS and LIPA. The process was originally designed to establish and sustain vital, interactive working relationships among NYSDPS, LIPA, and Schumaker & Company project team during the course of a management and operations audit. We have refined this three-step process over many reviews, audits, and studies conducted with the same team members proposed for this project.

We have assembled a project team with a strong working knowledge of utility company operations, as well as current industry issues. Each individual has been carefully selected according to his or her experience, technical expertise, and education in those areas for which he or she is proposed. Schumaker & Company consultants are mature and experienced, with advanced degrees and practical business management experience. They consistently meet high standards of professional competence within their disciplines and have the team skills needed to work collaboratively with client organizations.

They continue to earn and maintain various professional qualifications and certifications relevant to their managerial and technical expertise as demonstrated in *Chapter V – Project Team and Responsibilities*.

Schumaker & Company brings a results-based philosophy to management audits such as this one. We also place considerable emphasis on New York State Department of Public Service (NYSDPS) participation, as well as LIPA participation, during the audit. These factors will enable NYSDPS and LIPA to derive maximum benefit from this review.

Schumaker & Company recognizes that this management audit will not be a functional audit. In the course of well over 50 similar audits/reviews, Schumaker & Company team members have developed an approach that has produced consistently sound, constructive results that are generally accepted by all involved parties. Therefore, we have modified our typical approach to ensure that it will be a more business process oriented approach.

We are proposing that the project team follow a three-step study process designed to achieve vital, interactive working relationships among the NYSDPS, LIPA, and our project team. Specifically, the three steps will be as follows:

- ◆ Step I – Project Orientation and Final Work Plan
- ◆ Step II – Detailed Review and Analysis
- ◆ Step III – Report Preparation

Working Relationship

The Schumaker & Company project team's policy of conducting high quality audits within established time frames entails the coordination of several aspects of the project, as summarized below:

- ◆ *Active Participation and Involvement by NYSDPS and LIPA* – The Schumaker & Company project team embraces a close working relationship with NYSDPS and LIPA management and staff in conducting this audit. We believe that we have demonstrated this in our previous work. This type of relationship supports the NYSDPS's full understanding of the basis for our findings and ensures their satisfaction that all pertinent issues have been addressed. We have operated under these requirements in previous audits and found that this high degree of participation leads to a superior work product. We accomplished this in past audits in Indiana, Kentucky, Massachusetts, Maine, Michigan, New Jersey, New York, Ohio, Pennsylvania, South Carolina, and Texas.

- ◆ *Logical, Efficient Methodology* – There are three phases of our audit methodology. All of the phases, which are each composed of several tasks (*Step I – Project Orientation and Final Work Plan, Step II – Detailed Review and Analysis, and Step III – Report Preparation*), and discussed in detail in *Chapter III– Approach, Methods, and Project Management*, with their completion dates and the anticipated due dates for major project deliverables. Our proprietary project management system, Project Management Information Application (PMIA), has been developed specifically to support and facilitate our investigations and analysis, based on our past experiences with other audits of utility operations and performance, management audits, and code of conduct reviews.
- ◆ *Generally Accepted Auditing Standards* – This audit must be conducted on an independent, objective basis, adequately supported by proper working papers, and reported constructively with due consideration of pertinent comments on findings, conclusions, and recommendations. Our procedures are in accordance with the standards as defined in the request for proposal and set forth in the National Association of Regulatory Utility Commissioners’ “Consultant Standards and Ethics for Performance of Management Analysis,” dated November 15, 1989, the US Government Accountability Office’s “Standards for Audit of Government Organizations, Programs, Activities, and Functions,” (commonly referred to as the “Yellow Book”), as applicable to performance audits, and US generally accepted auditing standards (GAAS) to the extent they apply to performance audits. This audit will comply with: (i) US GAAS related to issues of management economy, efficiency, and effectiveness as applicable to performance audits and/or, (ii) as set forth in generally accepting accounting principles (GAAP). PMIA has been specifically developed to meet the requirements of these standards.
- ◆ *Straightforward, Concise Final Report* – The final report will contain detailed, meaningful findings and well-developed conclusions. It will clearly address the level of compliance desired by the NYSDPS.
- ◆ *On-Site Presence* – Approximately 60% of the staff time will be spent on-site. We believe this degree of involvement is essential to perform a thorough investigation and provide a high degree of interaction with the NYSDPS and LIPA management and staff.
- ◆ *Rationale for Findings* – The Schumaker & Company project team’s findings will be based on facts that are correct and true and, when combined with professional experience, will provide a complete perspective of the services under review. Furthermore, substantiation (audit trail) for each finding will be evident in the project’s working papers. To ensure that an adequate audit trail is established and maintained, we adhere to generally accepted auditing standards, as described previously. These standards provide guidance in the formulation of objective, independent audit findings supported by proper working papers and reported constructively. The final report will be fair and equitable in addressing the results of the evaluations in each area of investigation.
- ◆ *Cost/Benefit of Recommendations* – Every attempt is made to categorize and quantify the cost and benefits of each recommendation. Additionally, each of the functions or issues will be rated based on its operating or performance level relative to its optimum as of the time of the audit.

- ◆ *Project Management and Control* – A project must be well planned and managed to ensure that NYSDPS’s objectives are realized and to prevent disruption of utility operations. In the conduct of this audit, Schumaker & Company’s project management procedures will address both technical and administrative issues. We are committed to ensuring that the project’s scope is identified, agreed upon, and controlled. We are committed to establishing project administrative procedures that will facilitate conduct of the audit without placing undue burdens on any of the involved staff.
- ◆ *Project Automation* – Various analysis and graphics software will be used by the Schumaker & Company project team consultants to perform many of the analyses for the development of findings and conclusions during the audit. In addition, several computerized project management and administrative techniques provided by Schumaker & Company will be used during the project. Our word processing systems facilitate footnoting of all written products to the appropriate working papers. All working papers will be maintained in PMIA, a proprietary Schumaker & Company database system for organizing and managing interviews, information requests, and final work papers on stratified or focused management audits. In addition, graphics and other software will facilitate the communication of our findings, conclusions, and recommendations to the NYSDPS and LIPA in situations where “pictures speak louder than words.” Draft task reports are typically transmitted electronically to the NYSDPS and company for review.
- ◆ *Independence and Objectivity* – We recognize that, although legislation has mandated this audit, LIPA has a vested interest in the results. Furthermore, LIPA will be able to use the results of this audit for initiating positive change within its organization. Therefore, we have tailored our audit approach to facilitate the involvement of LIPA management and staff, and their input into the process, while carefully maintaining Schumaker & Company’s independence and objectivity.

The preceding principles will help us to focus our resources in conducting this audit of LIPA.

Cost and Benefit Analyses

As discussed in other sections of our proposal response, a detailed list of recommendations in the report will address immediate changes that management can institute to achieve cost savings, and the detailed list will be prioritized. The final report defines a suggested time table for the proposed implementation of each recommendation, and provides estimates of the costs and benefits of recommendations where such costs and benefits are quantifiable within the scope of the audit. We believe that it is extremely important to attempt to develop a cost/benefit analysis for any recommendations that can support such an analysis. Although it would be difficult to develop a cost/benefit analysis for every recommendation that is made during a management and operations review, there are usually some recommendations which lend themselves to such an analysis. Furthermore, in many cases involving the better managed utility, the utility may have already performed similar cost/benefit analysis for a similar recommendation or other process improvement for which they should be given credit. Therefore, it is our practice to work with the utility to develop cost/benefit analyses wherever possible. Costs and benefits will include both qualitative and quantitative figures obtained through data obtained during the course of the audit.

B. Background Information

Schumaker & Company's project team appreciates and understands what is required to conduct management and operations audits. Our success in providing these types of reviews is borne out by our prior audits in the utility industry. In the past five years, most members of our proposed team have performed management and operations audits of the following companies for regulatory commissions:

- ◆ *Jersey Central Power and Light Company* (subsidiary of FirstEnergy) – Assisted the New Jersey Board of Public Utilities in an audit of the affiliated transactions between Jersey Central Power and Light (JCP&L) and its affiliates, and a comprehensive management audit of JCP&L. Task areas included an examination of affiliate relationships and cost allocation methodologies, executive management and corporate governance, organization structure, human resources, strategic planning, finance, accounting and property records, cash management, procurement and purchasing of energy, distribution and operation management, extensions and upgrades to provide regulated services, clean energy, market conditions, contractor performance, customer service, external relations, support services, and a review of actions taken by JCP&L regarding prior audits. As part of the audit, Schumaker & Company conducted an extensive review of FirstEnergy emergency/storm response/restoration/communications and electric reliability programs as a part of a management audit for the NJBPU, including reliability benchmarks and standards regarding (1) customer average interruption duration index (CAIDI), (2) system average interruption frequency index (SAIFI), (3) system average interruption duration index (SAIDI), and (4) momentary average interruption index (MAIFI). Schumaker & Company also reviewed and assessed affiliate cost allocation methodologies to determine accounting and allocation procedures for separating the costs of inter-company transactions. Analysis determined if current accounting and allocation procedures were equitable, fair, and did not favor certain affiliates over JCP&L and its ratepayers. This assignment involved nine consultants over roughly 2,944 hours for a total project cost of approximately \$594,720.
- ◆ *PECO Energy Company* (subsidiary of Exelon Corporation) – Assisted the Pennsylvania Public Utility Commission (PaPUC) staff in a stratified management and operations audit of PECO Energy Company. This audit consisted of three phases. The first phase was a diagnostic review assessing the condition of each functional area or business unit against evaluative criteria or expected business practice. The second phase was an in-depth analysis of pre-identified areas or issues, including affiliate relationships and associated transactions and cost allocations. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any. The third phase was an in-depth, focused analysis of two issues (emergency response and GIS) approved by the Bureau of Audits resulting from the diagnostic review. This third phase included reliability benchmarks and standards regarding CAIDI, SAIFI, SAIDI, MAIFI and emergency/storm response/restoration/communications and business continuity planning. This assignment involved ten consultants in roughly 4,064 hours during a 13-month effort for a total project cost of approximately \$843,112.

- ◆ *Equitable Gas Company* – Assisted the PaPUC in performing a stratified management and operations audit of Equitable Gas Company (EGC), a subsidiary of EQT Corporation, and EGC's relationship with its affiliates. The primary focus of this management and operations audit was the business components of EGC that are still subject to regulation by the Pennsylvania Public Utility Commission. Specifically, we addressed EGC service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. The objectives included the determination of what improvements, if any, could be accomplished in the management and operations of EGC pursuant to Section 522(b) of the Public Utility Code 66 Pa. C.S. §522(b). Specifically, Schumaker & Company looked for economies, efficiencies, or improvements that benefit EGC and its ratepayers. In doing so, Schumaker & Company identified which, if any, economically practical opportunities for cost-saving measures and/or better service could be instituted. This audit consisted of three phases. The first phase involved a diagnostic review that assessed the condition of each functional area or business unit against evaluative criteria or expected business practice. While this review was primarily limited to determining if appropriate management controls, systems and processes are in place, it was of sufficient scope to identify significant problems, if any, requiring additional focused analysis. The second phase entailed an in-depth analysis of pre-identified areas or issues. These analyses were of sufficient depth to provide specific recommendations for changes in combination with projected costs and potential dollar savings or other quantifiable benefits, if any. The third phase constituted an in-depth, focused analysis of issues approved by the Bureau of Audits that resulted from the diagnostic review. This assignment involved eight consultants over roughly 2,920 hours during an 11-month effort, for a total project cost of approximately \$620,329.
- ◆ *Philadelphia Gas Works* – Assisted the PaPUC in performing a stratified management and operations audit of Philadelphia Gas Works (PGW). The primary focus of this management and operations audit was to review those PGW business components subject to regulation by the PaPUC, specifically PGW service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. The objectives included determination of what improvements, if any, could be accomplished in the management and operations of PGW pursuant to Section 522(b) of the Public Utility Code 66 Pa. C.S. §522(b). Specifically, Schumaker & Company looked for economies, efficiencies, or improvements which benefit PGW and its ratepayers. In doing so, Schumaker & Company identified which, if any, economically practical opportunities for cost saving measures can be instituted. This audit consisted of two phases. The first phase was a diagnostic review assessing the condition of each functional area or business unit against evaluative criteria or expected business practice. While this review was primarily limited to determining if appropriate management controls, systems and processes were in place, it was of sufficient scope to identify significant problems, if any, requiring additional focused analysis. The second phase was an in-depth analysis of pre-identified areas or issues. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any. This 14-month engagement involved seven consultants and approximately 2,340 hours for total project costs of approximately \$526,271.

- ◆ *Pennsylvania-American Water Company (subsidiary of American Water Works Company)* – Assisted the PaPUC staff in a stratified management and operations audit of Pennsylvania-American Water Company (PAWC). This audit consisted of three phases. The first phase was a diagnostic review assessing the condition of each functional area or business unit against evaluative criteria or expected business practice. The second phase was an in-depth analysis of pre-identified areas or issues, including affiliate relationships and associated transactions and cost allocations. The third phase was an in-depth, focused analysis of two issues approved by the Bureau of Audits resulting from the first phase, specifically items in the human resources and water operations areas. This assignment involved eight consultants in roughly 3,093 hours during a 12-month effort for total project costs of approximately \$651,694.

In short, our proposed project team for this management audit is a group of individuals who have dedicated themselves to working together as a project team and not just a group of consultants pulled together on a project-by-project basis.

Understanding of Electric Utility Industry

“Over 6,000 companies in the US are involved in the wholesale trade and retail distribution of electricity, with combined annual revenue of more than \$220 billion. Companies include owners of high voltage transmission lines, retail distribution systems, and intermediaries like energy dealers and brokers. The US is the world’s second largest producer/user of electric energy. It consumes about 20% of the world’s supply of electricity. Total consumption in 2010 was close to 4 billion megawatt-hours (MWh) of electricity per year, about 50 percent of which is bought and sold on the wholesale market.¹”

The energy industry has changed significantly in the last ten years. With the advent of deregulation, energy companies have been forced to rethink and restructure their business models. Previously vertically integrated companies have had to separate their business into individual components with generation assets being put into separate entities or divested altogether, the creation and, in many cases, dissolution of energy trading operations, the control of transmission assets being ceded to some form of independent system operator (ISO), the energy distribution and customer service operations of the utility being restructured, and the unbundling of rates into individual generation (or supply), transmission, distribution, and customer service components.

Currently the electric energy industry is in state- and federally-sponsored transitions, or electric restructuring. The traditional electricity industry consists of large investor-owned utilities; municipal utilities; rural cooperatives; and government entities, like the Tennessee Valley Authority (TVA), that owns the generation, transmission, and retail distribution facilities within a limited area, and serves all customers within that area as tightly regulated “natural monopolies.” Under restructuring, the generation, transmission, and distribution operations are carried out by separate companies, and the owners of local distribution lines make their lines available to competitors. About half the states have adopted restructuring legislation, but only a third is actively engaged in restructuring.

¹ Wikipedia (http://en.wikipedia.org/wiki/Energy_in_the_United_States) 4/10/2012

The intended purpose of moving toward a less regulated electricity market is to decrease the cost of electricity by fostering competition among producers. The practical effect of federal and state legislation has been the divestment of generation facilities by local utilities. These changes have also brought about the formation of larger utilities (whether adjacent to each other or distant) through company mergers, such as American Electric Power and Central and Southwest, Duke Energy and Cinergy, MidAmerican and PacifiCorp, Commonwealth Edison and PECO Energy Company, and others. Despite restructuring, many local electricity distributors are owned by utility holding companies that also own power generation facilities, wholesale transmission lines, and wholesale power trading companies.

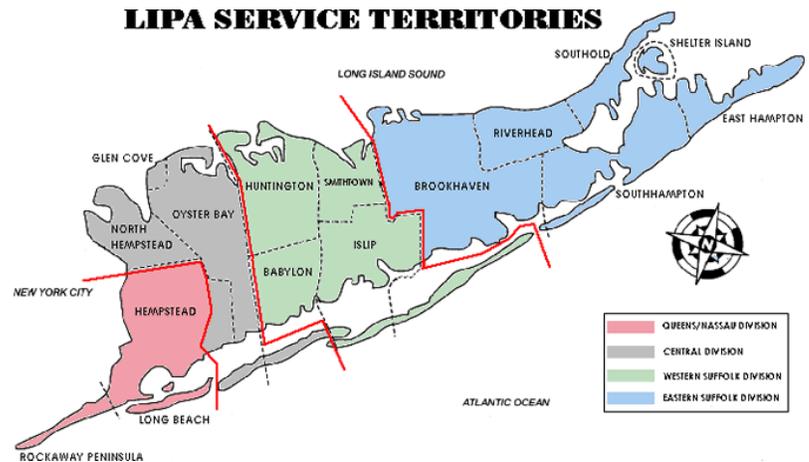
Although much has changed in the electric utility industry, some basics remain – such as electricity must still flow through wires. The actual operations of retail electricity distributors consist of generating or acquiring wholesale power (often under long-term supply contracts), maintaining and extending a line network, and billing and collections. The facilities and equipment needed to provide this energy must be built and maintained, meters must be read and bills generated, and storms must be addressed. New technologies have been developed in the last ten years that have changed the way that a utility can perform some of these functions, but they all still revolve around having an adequate trained workforce to meet the day-to-day needs of the customer. How well the utility is organized and managed to address these basic business requirements, including its interactions with affiliates, is of interest for this audit.

Understanding of LIPA

The Long Island Power Authority (LIPA) owns the electric transmission and distribution system on Long Island that delivers power to more than 1.1 million retail customers in Nassau and Suffolk counties and the Rockaway Peninsula in Queens. The company's network, which is managed and operated by National Grid Electric Services, LLC (National Grid USA), consists of nearly 14,000 miles of overhead and underground lines. LIPA offers energy conservation products and services, as well as incentive programs to encourage customers to purchase energy from "green" (environmentally friendly) power generation sources. LIPA is a municipally owned, not-for-profit utility company. LIPA is the second largest municipal electric utility in the nation in terms of electric revenues, third largest in terms of customers served, and the seventh largest in terms of electricity delivered. In 2010, LIPA outperformed all other overhead electric utilities in New York State for frequency of service interruptions, and ranked second for duration of service interruptions.

National Grid USA, previously Keyspan Energy, maintains LIPA's transmission and distribution system under a management services agreement (MSA). On December 15, 2011, LIPA selected PSEG Long Island LLC to take over management and operation of the electric grid, starting in January 2014, under an Operations Services Agreement (OSA).

LIPA's transmission voltages are 345,000, 138,000, and 69,000 volts; sub-transmission voltages are 33,000 and 23,000 volts; and distribution voltages are 13,200 and 4,000 volts. LIPA owns approximately 2100 kilometers (1,300 miles) of transmission line facilities that deliver power to approximately 177 substations in its electricity system. From these substations, approximately 24,100 circuit kilometers (15,000 miles) of distribution facilities distribute electricity to 1.1 million customers.



On January 24, 2007, then-Governor Eliot Spitzer announced that Kevin Law would replace Richard Kessel as Chairman of LIPA until the fall when a new Chair would be named and Law would become Chief Executive Officer of LIPA. On October 8, 2007, Law took over as President & Chief Executive Officer (CEO). Kevin Law stepped down on September 1, 2010 to become the new President of the Long Island Association. The Chief Operating Officer (COO) Michael Hervey assumed the responsibilities as Acting CEO until a new CEO & President is selected by the LIPA Board of Trustees.

C. Project Team

The single most important element a consulting firm brings to an assignment is the qualifications of the individual members of the consultant team. In combination, we respectfully submit that Schumaker & Company offers the New York State Department of Public Service (NYSDPS), LIPA, and LIPA's ratepayers a team that is unequalled in relevant experience, capability, and dedication to the completion of a highly successful engagement. Our project team's recent relevant experience (discussed in *Chapter V – Project Team and Responsibilities*) in conducting a management and operations review of numerous electric, gas, telecommunications, and water utility organizations makes our team uniquely qualified for this assignment.

D. Understanding of the New York Management Audit Program

Schumaker & Company has performed over 65 management and operations reviews and assessments in the utility industry since its existence in 1986. In the last five years, our proposed project team has performed over 18 of these reviews alone. We have reviewed and thoroughly understand “The Guide”² requirements.

Schumaker & Company has proposed on over six different management and operations reviews for the New York State Department of Public Service and we have been selected for finalist interviews in each case. In fact, we were recently selected to perform the management audit of National Fuel Gas Distribution Corporation for the NYSDPS. We have watched as the New York program has transformed its program into a viable, ongoing program by placing more emphasis on what is called cost/benefit analyses. Our firm has always incorporated a level of cost/benefit analyses as a part of our project approach and has been able to do such to achieve results for longer than the reactivated New York Management Audit Program has been in existence.

² / “The Guide” New York State Department of Public Service – The Guide for Consultants Submitting Proposals for Management and Operations Audits.

II. Scope and Objectives

A. Scope

The New York State Department of Public Service (Department or NYSDPS) is seeking an independent consultant to perform a comprehensive management and operations audit of the Long Island Power Authority (the Authority or LIPA). The NYSDPS is directed by this legislation to perform this audit, as provided in Public Authorities Law (PAL) §§1020-s and 1020-cc. The audit will be performed pursuant to the Long Island Power Authority Oversight and Accountability Act (Act), which was signed into law on February 1, 2012. In accordance with Public Authority Law (PAL) §1020 –f(bb), the primary focus of the engagement is to review the operating effectiveness of LIPA by evaluating its operations and management through the performance of a management and operations audit in the context of its duty to set rates at the lowest level consistent with standards and procedures provided in PAL §1020 –f(u). Its scope includes:

- ◆ LIPA’s construction and capital program planning in relation to the needs of its customers for reliable service
- ◆ The overall efficiency of LIPA’s operations
- ◆ The manner in which LIPA is meeting its debt service obligations
- ◆ LIPA’s fuel and purchased power cost adjustment clause and recovery of costs associated with such clause
- ◆ LIPA’s annual budgeting procedures and process
- ◆ LIPA’s compliance with debt covenants

LIPA is currently in transition from its Management Services Agreement (MSA) with National Grid USA (National Grid), which operates the LIPA electric system. The MSA will be replaced on January 1, 2014 with an Operations Services Agreement (OSA) with Public Service Enterprise Group (PSEG) Long Island LLC. As this audit is taking place within the transition period, we understand that we should focus on the changes that are being incorporated into the OSA to strengthen operations and oversight, and note areas that may need more detailed analysis in our next audit in 2015, as well as reviewing the change control processes LIPA has implemented to ensure a successful transition, and make recommendations for improvements to those processes where appropriate.

Schumaker & Company will provide an audit report involving each task area, which will contain the results of the audit and recommendations for improvement. We will also include a discussion of the present effectiveness of each area of discipline and suggestions for greater future efficiency and effectiveness as recommended.

Our review will encompass and identify all functions whether conducted at the electric operating company, by National Grid on behalf of LIPA, or at the newly-announced service company (ServCo)

level and whether the underlying management and operations are efficient resulting in reasonable costs to LIPA's ratepayers.

Schumaker & Company subscribes to the audit standards set forth by the National Association of Regulatory Utility Commissioners' "Consultant Standards and Ethics for Performance of Management Analysis," dated November 15, 1989, the US Government Accountability Office's "Standards for Audit of Government Organizations, Programs, Activities, and Functions," (commonly referred to as the "Yellow Book"), as applicable to performance audits, and US generally accepted auditing standards (GAAS) to the extent they apply to performance audits. This audit will comply with: (i) US GAAS related to issues of management economy, efficiency, and effectiveness as applicable to performance audits and/or, (ii) as set forth in generally accepting accounting principles (GAAP).

Our final report will address these broad areas in separate chapters, will be detailed and will attest to whether LIPA's performance is reasonable and adequate in the various areas.

B. Objectives

Generally, the Commission's objectives for the Management Audit Program are to:

- ◆ Identification of specific opportunities for improving planning, business processes and management practices, organizational design, staffing, operations, and performance management
- ◆ Identification of specific opportunities to improve performance, including operational efficiency and productivity, operational reliability, organizational effectiveness, cost savings, work quality, customer service, safety and other measurable elements
- ◆ Development of recommendations for implementing changes or undertaking the studies necessary to achieve performance improvements
- ◆ Development of cost/benefit analyses and any other guidance for the implementation of improvement opportunities and recommendations

We recognize that this audit is not to be performed using the organizational unit (silo) approach. At the same time, however, it will include, but not be limited to, an investigation of the efficiency and performance of the company's operations as required by Public Authority Law.

C. Major Tasks and Areas

This section provides a full listing of the areas to be covered under each major task. As per the RFP, the management and operations audit will focus on the following elements:

E1: THE AUTHORITY'S CONSTRUCTION AND CAPITAL PROGRAM PLANNING IN RELATION TO THE NEEDS OF ITS CUSTOMERS FOR RELIABLE SERVICE AND THE OVERALL EFFICIENCY OF THE AUTHORITY'S OPERATIONS

- a. Corporate governance, including mission, objectives, goals, and planning
 - 1) Executive management
 - 2) Current and future organizational structure
 - 3) Board of Trustees
 - 4) Communications and control
 - 5) Strategic planning
 - 6) Outside services
 - 7) Enterprise risk management
- b. System planning
- c. Program and project planning and management
- d. Performance and results
- e. Efficiency of the Authority's operations:
 - 1) Work force management
 - 2) Customer service
 - 3) Transmission and distribution
 - 4) Reliability
 - 5) Preventive maintenance
 - 6) Repair/replace and reactive/corrective maintenance

E2: THE MANNER IN WHICH THE AUTHORITY IS MEETING ITS DEBT SERVICE OBLIGATIONS

- a. Debt service management
 - 1) Application of industry standards to manage debt
 - 2) Receipt of necessary approvals for debt management
 - 3) Audit of debt management practices
 - 4) Effectiveness of risk management techniques
 - 5) Effectiveness of the rate making model relative to meeting the Authority's debt obligations
 - 6) Background events that led to the establishment of the Shoreham acquisition adjustment and subsequent changes to the adjustment
 - 7) Cash reserve policy

E3: THE AUTHORITY'S FUEL AND PURCHASED POWER COST ADJUSTMENT CLAUSE AND RECOVERY OF COSTS ASSOCIATED WITH SUCH CLAUSE

- a. Fuel and purchased power clause
 - 1) LIPA's active and effective involvement in New York Independent System Operator (NYISO) issues and operation as well as other regional entities
 - 2) LIPA's fuel and purchased power contract management, including PSA, Fuel Management and Bidding Services Agreement (FMBSA), and EMA
 - 3) LIPA's fuel and purchased power cost adjustment clause Tariff Leaf 166
 - 4) LIPA's fuel and purchased power cost recovery
- b. Supply procurement and load forecasting
 - 1) LIPA's supply procurement
 - 2) Load forecasting

E4: THE AUTHORITY'S ANNUAL BUDGETING PROCEDURES AND PROCESS

- a. Capital and O&M budgeting
- b. Program and project planning and management

E5: THE AUTHORITY'S COMPLIANCE WITH DEBT COVENANTS

- a. Compliance with all debt covenants
- b. Management of debt covenant requirements

Within the context of each element, we will address the generic questions and issues, including:

- 2. Purpose, mission, planning, goals and objectives, and strategies
- 2. Functions, processes (including inputs and outputs), policies, practices, and systems
- 3. Organizational design
- 4. Staffing, responsibilities and accountabilities
- 5. Cost control/cost oversight/cost analysis
- 6. Efficiency and effectiveness
- 7. Results and performance measurement including how the results are used
- 8. Opportunities for improvements, including "best practices" (based on our past experience) that are appropriate to New York State operating environment

The audit will emphasize an assessment of LIPA's effectiveness in meeting its mission, particularly with respect to meeting its performance goals and the extent to which there are opportunities for improvement.

A final report will be prepared and all findings and recommendations will be thoroughly documented. Further, while the planned date for the initial draft is February 2013, we will bring to Staff's and LIPA's attention any matters of significance in advance of the initial draft report (as they are identified) that would, if adopted, improve LIPA's operations.

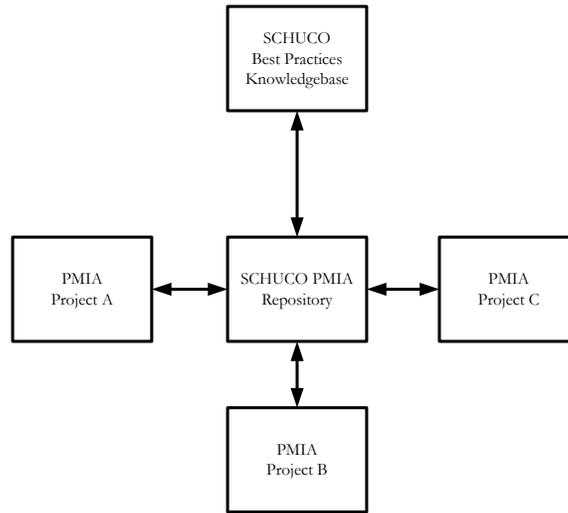
D. Key Schumaker & Company Advantages

SCHUCO Best Practices Knowledgebase

Over the last ten years, Schumaker & Company (SCHUCO) consultants have performed numerous assignments involving the review and assessment of various business practices and processes used with all types of businesses including electric, gas, water, and telecommunications companies, and state and local government entities. All of the information reviewed and interviews conducted have been collected and retained within Schumaker & Company's PMIA website. These information sources are arranged by project and project work plan codes among other categories. In addition, certain information is also tagged with a "Best Practices" designation. If a responsible consultant identifies a business practice or process which he/she believes is an exceptional business practice or process, those particular information source can be identified (flagged) to facilitate easy retrieval some time later.

The *SCHUCO Best Practices Knowledgebase* provides a knowledgebase for readily accessed these Best Practices that have been identified on prior projects by all consultants have been involved on the project. This website accesses all the information that has been collected and retained on the various projects within the PMIA website. Whereas PMIA is typically used on a project-by-project basis such that only the information from the current PMIA project to which the user is logged in can be worked with or seen, the *SCHUCO Best Practices Knowledgebase* spans all and/or selected information contained within PMIA. PMIA is essentially one database that contains all the information from all Schumaker & Company projects.

**Exhibit II-1
SCHUCO Best Practices Schematic**



There is no way to upload information directly to the ***SCHUCO Best Practices Knowledgebase***. The uploading of information is done on an individual project-by-project basis using PMIA. However, the ***SCHUCO Best Practices Knowledgebase*** permits the selecting, sorting, and viewing of information from all PMIA projects.

Cost/Benefit Experience

Whenever possible, we support our recommendations with cost/benefit analyses which take into account, among other things, one-time and ongoing costs, potential benefits and risks, and potential savings or efficiencies. Schumaker & Company bring unique insight and experience relevant to management and operational reviews of electric and gas utilities. Our project team brings considerable experience to this proposed assignment as illustrated in *Chapter V – Project Team and Responsibilities* and *Chapter VII – Experience and Qualifications* of this proposal.

It is our intention to develop an audit report that reflects those areas which hold the opportunity for organizational, operational, and financial improvement at LIPA, not those areas where LIPA is employing best practices. This has been the philosophy that has been followed by Schumaker & Company in our past utility management and operations review reports and we believe that it has proven to be beneficial to all involved stakeholders.

Schumaker & Company consultants will approach this management audit from an objective standpoint. Having stated that fact, the RFP requested that we identify the major areas of importance in the audit that offer the greatest potential for cost savings, remedying operating problems, or controlling costs. Without conducting the management audit, it would be inappropriate to presume that certain audit areas are more important than others in the management of the utility. Granted some areas within a utility are responsible

for the management of more dollars in the day-to-day operations of the utility than others, so the potential for savings would be greater. However, in the past 20 years of performing management audits, we continue to be amazed that our initial perceptions of what a company does well or not before the start of the audit is changed once the in-depth investigations begin. We have not only identified various qualitative and quantitative benefits and costs resulting from our recommendations but, more importantly, have obtained both the company and commission agreement on the benefits and cost savings.

On several recent management audits, we have recommended and obtained agreement, from both the company undergoing the audit and the commission overseeing the audit, to perform a third phase of the project where additional staff hours were expended to further investigate areas offering potential that were identified during the earlier stages of our review. Our recent experiences working for utility commissions on management audits demonstrates our ability to establish and sustain vital, interactive working relationships among NYSDPS, LIPA, and the Schumaker & Company project team during the course of a management and operations audit resulting in an agreement on recommendations for change, where appropriate.

The detailed list of recommendations in the report will address immediate changes that management can institute to achieve cost savings, and the detailed list will be prioritized. The final report defines a suggested time table for the proposed implementation of each recommendation, and provides estimates of the costs and benefits of recommendations where such costs and benefits are quantifiable within the scope of the audit. In past audits of this nature, costs have tended to fall into one of three categories:

- ◆ Assign existing personnel to implement recommendations, resulting in little/no incremental costs
- ◆ Engage outside expert resources to implement recommendations, resulting in incremental costs
- ◆ Procure additional software and equipment, also resulting in incremental costs

Likewise, the benefits associated with recommendations usually fall into one of four categories:

- ◆ Reduction in actual costs of operations within a functional area
- ◆ Increase in a revenue source within a functional area
- ◆ Change in processes to allow for provision of services to customers more cost-effectively
- ◆ Change in other processes resulting in best business practices being implemented

Schumaker & Company believes that it is extremely important to attempt to develop a cost/benefit analysis for any recommendations that can support such an analysis. Although it would be difficult to develop a cost/benefit analysis for every recommendation that is made during a management and operations review, there are usually some recommendations which lend themselves to such an analysis. Furthermore, in many cases involving the better managed utility, the utility may have already performed similar cost/benefit analysis for a similar recommendation or other process improvement for which they should be given credit. Therefore, it is our practice to work with the utility to develop cost/benefit analyses wherever possible. Costs and benefits will include both qualitative and quantitative figures obtained through data obtained during the course of the audit.

Provided unsolicited by the Pennsylvania Public Utility Commission, *Exhibit II-2* demonstrates results the Schumaker & Company consulting team, with many of the same proposed individuals, had on four recent similar utility audits.

Exhibit II-2
Recent Pennsylvania Public Utility Commission Press Releases

Pennsylvania Public Utility Commission

ity Natural Gas Telecommunications Water/Wastewater Transportation & Safety

Press Releases
[Home \ Press Releases](#)

PUC Audit Shows Pennsylvania American Water Co. Could See \$1.1 Million in Annual, and \$400,000 in One-Time Savings

November 06, 2008

HARRISBURG – According to an audit report released today by the Pennsylvania Public Utility Commission (PUC), Pennsylvania American Water Company (PAWC) could experience yearly savings of up to \$1.1 million and one-time savings of up to \$400,000 by implementing recommendations contained in the audit report.

The Commission voted 5-0 to make the audit report and PAWC’s implementation plan public. PUC Vice Chairman Tyrone J. Christy issued a [statement](#).

The Stratified Management and Operations Audit was conducted by the consulting firm Shumaker and Co. Inc. on behalf of the Commission. The audit analyzed and evaluated management performance in 20 functional areas and resulted in 114 recommendations for improvement. In its implementation plan, submitted to the Commission on Sept. 8, 2008, PAWC accepted 106 recommendations, partially accepted seven recommendations and rejected one recommendation.

Please refer to http://www.puc.state.pa.us/general/press_releases/press_releases.aspx?ShowPR=2121 for more details.

Pennsylvania Public Utility Commission

ity Natural Gas Telecommunications Water/Wastewater Transportation & Safety

Press Releases
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PUC Audit Shows Equitable Could Realize Between \$4.3 and \$7.1 Million in Annual, and \$50,000 in One-Time Savings

June 16, 2010

HARRISBURG – According to an audit report released today by the Pennsylvania Public Utility Commission (PUC), Equitable Gas Co. could see yearly savings of between \$4.3 and \$7.1 million and one-time savings of up to \$50,000 by implementing recommendations contained in the audit report.

The Commission voted 4-0 to make the audit report and Equitable’s implementation plan public. The report indicated that Equitable has taken positive steps toward improving deficiencies found during a 2001 audit including, slowly improving customer collection issues and the efficiency and effectiveness of its operations despite its financial constraints.

The Stratified Management and Operations Audit was conducted by the consulting firm Schumaker & Company on behalf of the Commission. The bulk of the audit fieldwork was completed in 2009.

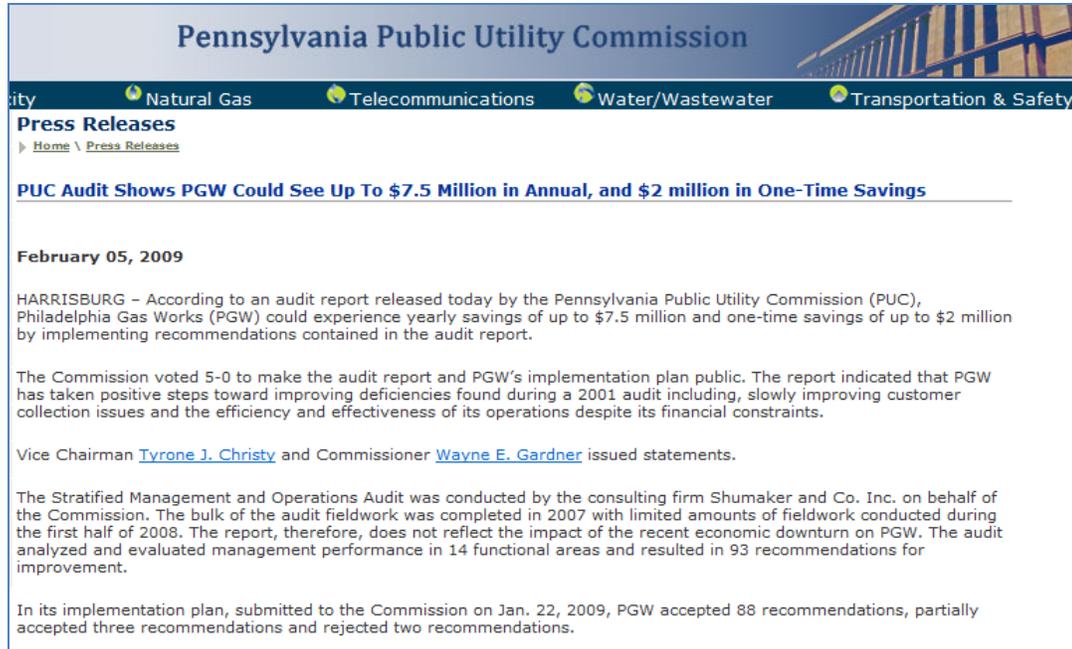
The audit analyzed and evaluated management performance in 15 areas and resulted in 72 recommendations for improvement including 11 in the Affiliated Interest area which was rated as needing major improvement. The recommendations for improvement in this area included:

- Enhancing and updating the company’s affiliated interest agreements and submitting to the PUC for review and approval;
- Developing a formal internal dividend policy; and
- Performing periodic studies to determine the cost of competitiveness of centralized functions and developing plans to address the results of these studies.

In its implementation plan, submitted to the Commission on May 21, 2010, Equitable accepted 58 recommendations, partially accepted 10 recommendations and rejected four recommendations.

Please refer to http://www.puc.state.pa.us/general/press_releases/press_releases.aspx?ShowPR=2543 for more details

Exhibit II-2
Recent Pennsylvania Public Utility Commission Press Releases



Pennsylvania Public Utility Commission

ity Natural Gas Telecommunications Water/Wastewater Transportation & Safety

Press Releases
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PUC Audit Shows PGW Could See Up To \$7.5 Million in Annual, and \$2 million in One-Time Savings

February 05, 2009

HARRISBURG – According to an audit report released today by the Pennsylvania Public Utility Commission (PUC), Philadelphia Gas Works (PGW) could experience yearly savings of up to \$7.5 million and one-time savings of up to \$2 million by implementing recommendations contained in the audit report.

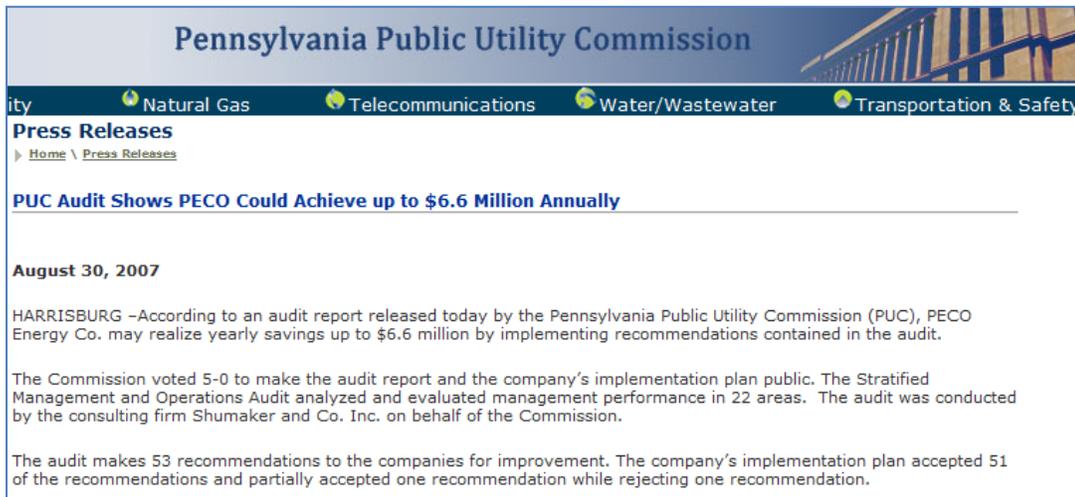
The Commission voted 5-0 to make the audit report and PGW's implementation plan public. The report indicated that PGW has taken positive steps toward improving deficiencies found during a 2001 audit including, slowly improving customer collection issues and the efficiency and effectiveness of its operations despite its financial constraints.

Vice Chairman [Tyronne J. Christy](#) and Commissioner [Wayne E. Gardner](#) issued statements.

The Stratified Management and Operations Audit was conducted by the consulting firm Shumaker and Co. Inc. on behalf of the Commission. The bulk of the audit fieldwork was completed in 2007 with limited amounts of fieldwork conducted during the first half of 2008. The report, therefore, does not reflect the impact of the recent economic downturn on PGW. The audit analyzed and evaluated management performance in 14 functional areas and resulted in 93 recommendations for improvement.

In its implementation plan, submitted to the Commission on Jan. 22, 2009, PGW accepted 88 recommendations, partially accepted three recommendations and rejected two recommendations.

Please refer to (http://www.puc.state.pa.us/general/press_releases/Press_Releases.aspx?ShowPR=2194) for more details.



Pennsylvania Public Utility Commission

ity Natural Gas Telecommunications Water/Wastewater Transportation & Safety

Press Releases
 ▶ [Home \ Press Releases](#)

PUC Audit Shows PECO Could Achieve up to \$6.6 Million Annually

August 30, 2007

HARRISBURG –According to an audit report released today by the Pennsylvania Public Utility Commission (PUC), PECO Energy Co. may realize yearly savings up to \$6.6 million by implementing recommendations contained in the audit.

The Commission voted 5-0 to make the audit report and the company's implementation plan public. The Stratified Management and Operations Audit analyzed and evaluated management performance in 22 areas. The audit was conducted by the consulting firm Shumaker and Co. Inc. on behalf of the Commission.

The audit makes 53 recommendations to the companies for improvement. The company's implementation plan accepted 51 of the recommendations and partially accepted one recommendation while rejecting one recommendation.

Please refer to (http://www.puc.state.pa.us/general/press_releases/Press_Releases.aspx?ShowPR=1833) for more details.

III. Approach, Methods, and Project Management

This chapter summarizes the approach, review methodology and procedures, and project management tools and techniques that Schumaker & Company, Inc. (Schumaker & Company) will apply to the management and operations audit of Long Island Power Authority (LIPA). Additional criteria that Schumaker & Company has developed over time from experiences with other utilities—by work plan area — is detailed in *Chapter IV – Areas and Issues for Review*.

A. Review Standards

Schumaker & Company subscribes to the audit standards set forth by the National Association of Regulatory Utility Commissioners’ “Consultant Standards and Ethics for Performance of Management Analysis,” dated November 15, 1989, the US Government Accountability Office’s “Standards for Audit of Government Organizations, Programs, Activities, and Functions,” (commonly referred to as the “Yellow Book”), as applicable to performance audits, and US generally accepted auditing standards (GAAS) to the extent they apply to performance audits. This audit will comply with: (i) US GAAS related to issues of management economy, efficiency, and effectiveness as applicable to performance audits and/or, (ii) as set forth in generally accepting accounting principles (GAAP).

B. Project Approach

Schumaker & Company brings a results-based philosophy to management and operations audits such as this one. We also place considerable emphasis on New York State Department of Public Service (NYSDPS) participation, as well as LIPA participation, during the audit. These factors will enable NYSDPS and LIPA to derive maximum benefit from this review.

Schumaker & Company recognizes that this management and operations audit will not be a functional audit. In the course of well over 50 similar audits/reviews, Schumaker & Company team members have developed an approach that has produced consistently sound, constructive results that are generally accepted by all involved parties. Therefore, we have modified our typical approach to ensure that it will be a more business process oriented approach.

We are proposing that the project team follow a three-step study process designed to achieve vital, interactive working relationships among the NYSDPS, LIPA, and our project team. Specifically, the three steps will be as follows:

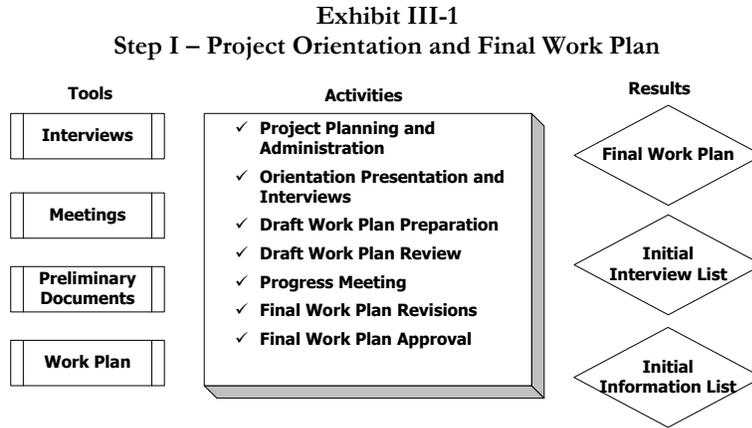
- ◆ Step I – Project Orientation and Final Work Plan
- ◆ Step II – Detailed Review and Analysis
- ◆ Step III – Report Preparation

The review methodology for each of these steps is provided on the following pages.



Step I – Project Orientation and Final Work Plan

Exhibit III-1 illustrates the tools used, activities performed, and results achieved during *Step I*.



The specific activities we will perform during this step are discussed in detail in the following paragraphs.

Project Planning and Administration

Upon award notification, our *Engagement Manager* and *Project Manager* will initiate project kick-off with a teleconference meeting to include the NYSDPS and LIPA representatives. The primary objectives of this project planning meeting are to finalize and schedule our investigations, to review and obtain NYSDPS and LIPA concurrence on our project management and administrative procedures, and to set up a timeframe when our consultants can be on-site for a kick-off presentation and to conduct orientation interviews. Specifically, activities to be performed during this step are identified as follows:

- ◆ Establishment of administrative procedures for the project with the NYSDPS *Project Manager* and LIPA *Project Coordinator(s)* including:
 - Interview scheduling procedures
 - Information request procedures
 - Progress reporting procedures
- ◆ Introduction of Schumaker & Company project management administrative procedures and computer capabilities for use on the project (see *Appendix C–Best Practices and Project Platform*.)
- ◆ Familiarization of personnel with the use of Schumaker & Company’s interview and information request tracking systems, referred to as our *Project Information Management and Administration* application
- ◆ Identification and scheduling of orientation interviews
- ◆ Submittal and review of initial information requests

Orientation Presentation and Interviews

Based on our experience on prior audits, it has proved to be beneficial for LIPA to make a kick-off presentation to our project team. This kick-off presentation should at a very high level present the following information:

- ◆ Overall organization charts for LIPA
- ◆ Key business processes to be investigated regarding the key process areas identified in RFP

E1: THE AUTHORITY'S CONSTRUCTION AND CAPITAL PROGRAM PLANNING IN RELATION TO THE NEEDS OF ITS CUSTOMERS FOR RELIABLE SERVICE AND THE OVERALL EFFICIENCY OF THE AUTHORITY'S OPERATIONS

- *Corporate governance, including mission, objectives, goals, and planning* – organizational units responsible for performing the business processes, key management personal that we might interview, key issues or initiatives underway, and key business processes or systems (computer or manual) used in support of business processes, including the following areas:
 - Executive management
 - Current and future organizational structure
 - Board of Trustees
 - Communications and control
 - Strategic planning
 - Outside services
 - Enterprise risk management
- *System planning* – organizational units responsible for performing the business processes, key management personal that we might interview, key issues or initiatives underway, and key business processes or systems (computer or manual) used in support of business processes
- *Program and project planning and management* – organizational units responsible for performing the business processes, key management personal that we might interview, key issues or initiatives underway, and key business processes or systems (computer or manual) used in support of business processes
- *Performance and results measurement* – current key performance indicators (KPIs) used within each functional area of the organization, including both strategic and operational KPIs; organizational unit responsible for performing reporting of KPIs; key management personal that we might interview; and key business process or systems (computer or manual) used for reporting KPIs

- *Efficiency of the Authority's operations* – organizational units responsible for performing the business processes, key management personal that we might interview, key issues or initiatives underway, and key businesses process or systems (computer or manual) used in support of business processes, including the following areas:
 - Work force management
 - Customer service
 - Transmission and distribution
 - Reliability
 - Preventive maintenance
 - Repair/replace and reactive/corrective maintenance

E2: THE MANNER IN WHICH THE AUTHORITY IS MEETING ITS DEBT SERVICE OBLIGATIONS

- *Debt service management* – organizational units responsible for performing the business processes, key management personal that we might interview, key issues or initiatives underway, and key business processes or systems (computer or manual) used in support of business processes, including the following areas:
 - Application of industry standards to manage debt
 - Receipt of necessary approvals for debt management
 - Audit of debt management practices
 - Effective of risk management techniques
 - Effectiveness of the rate making model relative to meeting the Authority's debt obligations
 - Background events that led to the establishment of the Shoreham acquisition adjustment and subsequent changes to the adjustment
 - Cash reserve policy

E3: THE AUTHORITY'S FUEL AND PURCHASED POWER COST ADJUSTMENT CLAUSE AND RECOVERY OF COSTS ASSOCIATED WITH SUCH CLAUSE

- *Fuel and purchased power clause* – organizational units responsible for performing the business processes, key management personal that we might interview, key issues or initiatives underway, and key business processes or systems (computer or manual) used in support of business processes, including the following areas:
 - LIPA's active and effective involvement in New York Independent System Operator (NYISO) issues and operation as well as other regional entities
 - LIPA's fuel and purchased power contract management, including PSA, Fuel Management and Bidding Services Agreement (FMBSA), and EMA

- LIPA’s fuel and purchased power cost adjustment clause Tariff Leaf 166
- LIPA’s fuel and purchased power cost recovery
- *Supply procurement and load forecasting* – organizational units responsible for performing the business processes, key management personal that we might interview, key issues or initiatives underway, and key business processes or systems (computer or manual) used in support of business processes, including the following areas:
 - LIPA’s supply procurement
 - Load forecasting

E4: THE AUTHORITY’S ANNUAL BUDGETING PROCEDURES AND PROCESS

- *Capital and O&M budgeting*– organizational units responsible for performing the business processes, key management personal that we might interview, key issues or initiatives underway, and key business processes or systems (computer or manual) used in support of business processes

E5: THE AUTHORITY’S COMPLIANCE WITH DEBT COVENANTS

- *Debt covenant compliance* – organizational units responsible for performing the business processes, key management personal that we might interview, key issues or initiatives underway, and key business processes or systems (computer or manual) used in support of business processes
 - Compliance with all debt covenants
 - Management of debt covenant requirements

In addition, the individual consultants will conduct brief follow-up interviews with key management personnel involved in the specific business processes to get a better understanding of the processes and systems involved. We will investigate each of the areas in our preliminary work plan, shown in *Chapter IV – Areas and Issues for Review*. Schumaker & Company’s *Engagement Manager, Project Manager, and Senior Consultants* will conduct these interviews and analyses as a means to more fully understand the issues involved in this project and to determine the extent to which interviews, documentation requests, and sampling of data must be conducted.

Prepare Draft Work Plan

The primary purposes of the above subtask is to develop a deeper understanding of the specific business processes and systems used by LIPA and to provide further technical definition and direction to our project team for preparing a draft work plan for the remainder of the project. Each of the key consultants will be involved in the development of the draft work plan. We will use the scope of work identified in the RFP and our preliminary work plan in *Chapter IV*, combined with our understanding of the business processes and systems within LIPA, as learned from the kick-off presentations and orientation interviews and combined with our consultants’ knowledge and the integration of the relevant parts of other management audit work plans that we have developed over the last five years, to draft a

detailed work plan for the remainder of this project. This work plan will be a process aligned by our interpretation of the business process flows identified in the RFP. Our work plan for each of the identified areas will include detail as follows for each task area:

- ◆ **Introduction** – An overall description of a process’ functions or activities
- ◆ **Proposed Staffing** – An identification of the consultants assigned to the work area and hours
- ◆ **Work Plan Areas** – The specific steps and activities we will take in assessing each work plan area are further described, as follows:
 - *Key Business Processes and Indicators* – Key business processes to be investigated and KPIs identified.
 - *Work Steps* – A detailed listing of the principle work steps to be completed and questions to be answered.
 - *Interviews* – Key LIPA personnel to be interviewed
 - *Information Required* – A preliminary list of the information requests required to evaluate this work plan area.

The draft work plan will be prepared and submitted to the NYSDPS for review and comment.

First Progress Meeting

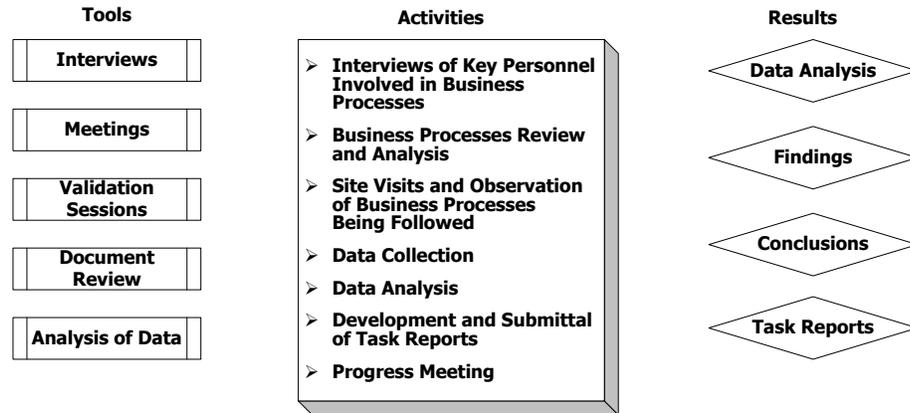
Final Work Plan Approval

Our project team will meet with the NYSDPS *Project Manager* and others, as appropriate, to discuss the draft work plan. Also, additional input from attendees on the work plan will be gathered at this time and revisions made, as appropriate. As an outcome of this meeting, the specific areas of focus in the final work plan will be confirmed.

Step II – Detailed Review and Analysis

Exhibit III-2 illustrates the tools used, activities performed, and results achieved during *Step II*.

Exhibit III-2
Step II – Detailed Review and Analysis



Interviews, Documentation, and Data Collection Review and Analysis

The Schumaker & Company project team consultants will visit LIPA's major facilities, conduct interviews with key NYSDPS and LIPA personnel (and others, as appropriate), and gather a variety of information and documents regarding the specific business processes and associated systems. The interviews with key management personnel typically consist of reviews of the organization and processes for which each employee is responsible and discussions of any areas of particular interest or concern. The need for detailed research or analysis by LIPA employees will be identified at this time.

This step will result in the development of findings and conclusions by the consultants, which will be verbally presented to the NYSDPS and LIPA representatives. In overall terms, this step consists of several principal activities: interviews, information and document reviews, and field observations of representative operations. The following paragraphs describe what each process encompasses.

- ◆ *Interviews* – Interviews are conducted with the personnel responsible for the management and direction of processes and activities in each of the issue areas.
- ◆ *Information and document reviews* – During the course of these interviews, information and documents relevant to the evaluation of each area are identified and collected for analysis.
- ◆ *Field observations* – We will visit LIPA facilities to provide an opportunity for visual inspection of the site, discussions with management and staff personnel, observations of procedures, and other information gathering techniques.
- ◆ *Data summaries* – Interview notes, results of reviews of relevant documents, and any numerical data collected for the purpose of quantitative analysis is organized and summarized by the project team members who have conducted the initial data collection in each area.

- ◆ *Development of findings and conclusions* – Based on the results of the data collection and analysis activities, findings and conclusions will be formulated that reflect our summary evaluation of the subject practices.

Task Reports Development

Task Reports Review

The input from the task briefing is compiled into the draft task reports, which will be submitted to the NYSDPS for review and comment. After comments are discussed and incorporated, the task reports will be submitted to LIPA for similar review. LIPA's comments should be provided to both the NYSDPS and the Schumaker & Company project team in writing. The Schumaker & Company project team addresses any concerns raised by the NYSDPS *Project Manager* and the LIPA *Project Coordinator(s)*.

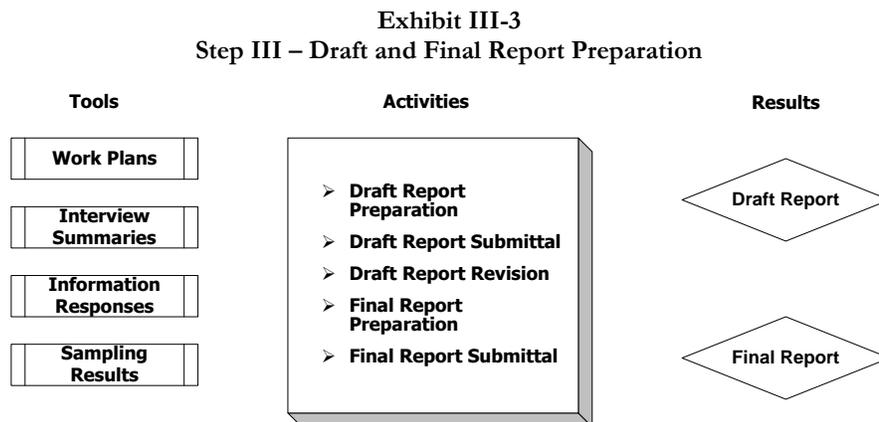
Draft Findings and Recommendations

Progress Meeting

Prior to completing our draft report, we will prepare a summary presentation of our findings and conclusions for review with the NYSDPS and LIPA representatives. Our draft findings and conclusions with input from these representatives will form the basis for our draft report preparation.

Step III – Draft and Final Report Preparation

Exhibit III-3 illustrates the tools used, activities performed, and results achieved during *Step III*.



This step will result in the preparation of the draft and final reports, which serve as the final result of the project, unless testimony is requested.

Draft Report Preparation

The results of our investigations will be summarized in a draft report that will be submitted to the NYSDPS and LIPA for review and comment. The draft report will be indexed to related supporting working papers, and will consist of the following information:

- ◆ Executive summary
- ◆ Brief overview of project
- ◆ Individual chapters for processes investigated, including:
 - Background and perspective
 - Findings and conclusions
 - Recommendations, including costs and benefits associated with each recommendation

Our report will reflect an objective appraisal of LIPA's processes, systems, and resource allocations. We will fully document any deficiencies/problems and provide improvement opportunities in the form of practical recommendations, associated quantified costs and benefits, and their implementation priorities. We will identify and recommend areas for adoption of industry best practices.

Draft Report Submittal and Review

Progress Meeting

Draft Report Revision

The draft report will be submitted to the NYSDPS *Project Manager* (and other staff as desired) for review and comment. After performing their review, the NYSDPS *Project Manager* will discuss resultant comments with the Schumaker & Company consulting team. The Schumaker & Company team will address all concerns raised by the NYSDPS *Project Manager*. Schumaker & Company will then submit the draft report to the LIPA *Coordinator(s)* for review and comment. A third progress meeting will be held with NYSDPS, LIPA, and key Schumaker & Company consultants to verify the material facts in the draft report and obtain written comments. All analyses and hypotheses must be continually assessed within the framework of the focus of the study, the status and structure of the LIPA, and the current utility environment. After incorporation of these comments into the report, as appropriate, the final report will be prepared and submitted.

Final Report Submittal

NYSDPS and LIPA must be satisfied that the end product is supported by accurate analyses. For this reason, Schumaker & Company places heavy emphasis on ensuring, to all participants' satisfaction, that project results are based on facts. Verification is done throughout the project to minimize open questions that may occur at its end.

The final report will consist of the following information:

- ◆ Executive summary
- ◆ Brief overview of project

- ◆ Individual chapters for processes investigated, including:
 - Background and perspective
 - Findings and conclusions
 - Recommendations, including costs and benefits associated with each recommendation

Finally, Schumaker & Company does not consider an engagement to be completed satisfactorily until LIPA has recognized the value of proposed recommendations and agreed to begin implementation.

C. Project Management Techniques

We use several project management and control techniques to ensure that budget, schedule, and quality specifications are achieved. These control mechanisms include project meetings, project critical path method (CPM) scheduling, and working papers/audit trails policies, procedures, and systems. Schumaker & Company has developed a proprietary project manual that describes the processes and procedures that have evolved as a result of our extensive experience. The manual also describes important tools that are unique to Schumaker & Company, such as our computerized *Project Management Information Application*, as discussed at length in *Appendix C – Best Practices & Project Platform*. The PMLA is also the support mechanism for our “working-paper system,” and our project manual contains a variety of standard forms and documents that facilitate procedures. We are confident that the project management techniques and tools used by the Schumaker & Company project team represent a significant advancement in successfully completing management and operations audits with a high degree of client satisfaction. Quite candidly, they set us at the forefront of the industry. Also included in *Appendix C – Best Practices & Project Platform* is a description of our *Time & Expense Information Reporting System* (TEIRS). A summary of key project management activities are described as follows:

Project Meetings

The standard approach used by the Schumaker & Company project team in performing these studies is firmly predicated upon the recognized need for direct participation by all parties in the review process. It also recognizes the vital importance of free and continuous bi-directional flow of pertinent information. To facilitate this flow, a standardized structure and schedule of meetings has been developed and is followed on each project. Descriptions of these meetings are presented below and further discussed in *Appendix C – Best Practices & Project Platform*.

Weekly Conference Call

We will institute a weekly conference call between ourselves and the NYSDPS *Project Manager*, plus any additional NYSDPS staff designated by the NYSDPS *Project Manager*. We have typically used a freeconferencecall.com telephone number to facilitate these calls. This conference call will be used to keep in touch regarding progress of the project, including discussion of all interviews being scheduled, information requests being processed, status of report sections (when applicable) and any other issues requiring discussion. This informal process ensures that everyone is fully aware of the project status. It

also focuses attention on important information. These discussions are used to track progress and update both the detailed work plan and the project schedule. We invite and actively encourage frequent participation of the NYSDPS *Project Manager* and staff in these discussions.

Progress Meetings

To promote optimum participation by, and interaction among, NYSDPS representatives and the Schumaker & Company team, we recommend frequent informal progress meetings. It is anticipated that these meetings will be held in relation to specific task areas and will focus on relevant topics. Additionally, Schumaker & Company is prepared to meet with the NYSDPS *Project Manager*, senior NYSDPS, subject matter experts (SMEs) and Commissioners at various times during the audit to discuss areas of interest and findings.

Verification Meetings

Prior to submittal of the written draft report to the FirstEnergy Companies, our consultants will conduct verification meetings with key personnel in each functional area. These meetings permit the consultants to verify key assumptions and facts before draft report submittal.

Schedule and Cost Control Techniques

Project Schedule

The Schumaker & Company project team uses microcomputer-based management tools to assist in managing our projects. The Microsoft Project application permits resource loading of schedules and ensures careful tracking of all activities. The application includes considerable graphics options for printing charts that pictorially represent the then-current status of projects and scheduled work. The project schedules and resource estimates contained in this proposal were produced with this software.

Project Costs

For professional services firms, tracking and billing for time are essential parts of doing business. Thus, Schumaker & Company developed TEIRS to collect information regarding time spent and expenses incurred by staff members and outside consultants on our client projects to provide the following:

- ◆ The system tracks hours, fees, and expenses, which are used by project managers to manage our projects.
- ◆ The system also provide extensive reporting, including project management reports—actual to budget, invoiced to actual, etc.— as a means to provide high-quality project management and control of costs.
- ◆ Professional fees and expenses associated with a project are automatically generated for client billing.



D. Audit Deliverables

Schumaker & Company shall provide all written documents, including progress report, work plans and draft and final reports electronically to the NYSDPS. The final report will be provided in a bookmarked, searchable PDF format to be viewed using *Adobe Acrobat Reader* software. The final report will include:

- ◆ *Introduction and Summary* – An overview of the audit, a numbered listing of each recommendation with a brief description of the facts and the rationale upon which each recommendation is based, and a recommendation index for easy reference to its location in the body of the report. It will also summarize the potential remediation costs and/or cost savings associated with a recommendation.
- ◆ *Work Plan Chapters* – The final report containing background, quantifiable findings, conclusions, and supporting recommendations on LIPA’s operations and the management of effectiveness and cost competitiveness of associated functions.

This section summarizes project deliverables and benefits resulting from our conduct of the proposed audit, which include those tabulated in the following table:

Deliverable	Content	Format
<ul style="list-style-type: none"> ◆ Weekly notice of upcoming interviews and site visits ◆ Informal meetings 	<p>Each week, we provide written notice of the interviews and site visits for the following two to four weeks, for review and approval from PMIA, our project management database system. We can provide a copy of this software to all parties and update it on a periodic basis, allowing both parties the opportunity to produce reports as often as they wish.</p> <p>In addition, we hold frequent informal meetings meant to facilitate NYSDPS <i>Project Manager</i> input and project team communication.</p>	<ul style="list-style-type: none"> ◆ Written reports ◆ Informal meetings
<ul style="list-style-type: none"> ◆ Monthly written status report 	<p>Monthly written status reports will be submitted to the NYSDPS <i>Project Manager</i> by the 5th business day following the month’s end. Part I will provide a brief, general narrative describing the project’s progress, its status to date – ahead, on, or behind schedule – and the reasons for any discrepancies between its progress and the task plan schedule. Part II of the monthly written status reports will consist of status sheets indicating actual hours logged, by individual, by task, as well as other costs (i.e., material and supplies). These status sheets will contain both actual dollars and the percentage of costs compared to budget.</p>	<ul style="list-style-type: none"> ◆ Written report
<ul style="list-style-type: none"> ◆ Informal weekly conference calls 	<p>We will institute a weekly conference call between ourselves and the NYSDPS <i>Project Manager</i>, plus any additional NYSDPS staff designated by the NYSDPS <i>Project Manager</i>. We have typically used a conference call number to facilitate these calls. This conference call will be used to keep in touch regarding progress of the project, including discussion of all interviews being scheduled, information requests being processed, status of report sections (when applicable) and any other issues requiring discussion, including emerging issues as they are known.</p>	<ul style="list-style-type: none"> ◆ Conference call
<ul style="list-style-type: none"> ◆ Progress meetings 	<p>To promote optimum participation by and interaction among NYSDPS representatives and consultant team, we recommend frequent informal progress meetings. It is anticipated that these meetings will be held in relation to specific task areas and will focus on relevant topics.</p>	<ul style="list-style-type: none"> ◆ In-person meetings or conference calls

Deliverable	Content	Format
<ul style="list-style-type: none"> ◆ Briefings and staff participation 	<p>We will provide regular briefings to Staff on the progress of the audit and will identify emerging issues as the audit progresses. The frequency of these briefings will be determined by ourselves and Staff. We expect Staff participation in interviews (in person or via teleconference) as well as regular communication with Staff throughout the course of the audit. Staff, as the client, reserves the right to oversee all aspects of the conduct of the audit. Additionally, Schumaker & Company is prepared to meet with the NYSDPS <i>Project Manager</i>, senior NYSDPS, subject matter experts (SMEs) and Commissioners at various times during the audit to discuss areas of interest and findings.</p>	<ul style="list-style-type: none"> ◆ PowerPoint handouts
<ul style="list-style-type: none"> ◆ Final detailed work plan 	<p>At the end of <i>Step I – Project Orientation and Final Work Plan</i>, a revised work plan will be prepared and submitted to the NYSDPS for approval. This revised work plan will encompass changes that should be made based on new information acquired from LIPA during this step. The revised work plan will then be used for both <i>Step II – Detailed Review and Analysis</i> and <i>Step III - Report Preparation</i>. We will confer with Staff from various offices of NYSDPS during the creation of our work plan. We will submit an initial and final draft work plan to Staff. These drafts will outline in detail the scope and methods to be employed during the engagement as well as a detailed schedule (including milestones) for the remainder of the review. We will modify the initial draft after giving due consideration to Staff's comments, and must then submit a final draft work plan to Staff for approval. Approval of the work plan by Staff will authorize the consultant to execute the tasks as stated therein.</p>	<ul style="list-style-type: none"> ◆ Electronic copies ◆ First progress meeting
<ul style="list-style-type: none"> ◆ Informal written summary of emerging issues and conclusions 	<p>Prior to the submission of the initial draft audit report, but not later than the midpoint of the audit, the consultant will prepare an informal written summary of emerging issues for NYSDPS review.</p>	<ul style="list-style-type: none"> ◆ Electronic copies
<ul style="list-style-type: none"> ◆ Draft task reports 	<p>The results of our investigations in each functional area will first be drafted as task reports for review first by the NYSDPS staff, and after NYSDPS approval, by LIPA. A three-party meeting will be held for discussion and to obtain LIPA's written comments which will be incorporated, as appropriate, into the final report.</p>	<ul style="list-style-type: none"> ◆ Electronic copies
<ul style="list-style-type: none"> ◆ Comprehensive first draft report 	<p>The results of our investigations in each functional area will be compiled into a draft report to the NYSDPS <i>Project Manager</i>. After NYSDPS approval, the draft report will be released to LIPA. LIPA will be permitted to review the applicable report and provide written comments, which will be incorporated, as appropriate, into the final report. These draft reports, after consideration of comments from the NYSDPS staff and LIPA, will form the basis for the final report. The report will be indexed to related supporting working papers. Such working papers will be submitted to the NYSDPS <i>Project Manager</i> upon request for up to three years following issue of the final report.</p>	<ul style="list-style-type: none"> ◆ Electronic files
<ul style="list-style-type: none"> ◆ Final report 	<p>Schumaker & Company will prepare the final report based on the draft report, comments received from the NYSDPS <i>Project Manager</i> and LIPA and the requirements of the RFP. The final report will be in narrative form, written in terminology meaningful to management and others generally familiar with the subject areas. The report will be fully footnoted.</p>	<ul style="list-style-type: none"> ◆ Electronic copies ◆ 20 paper copies



Deliverable	Content	Format
♦ Working papers	A working-paper system will be provided that enables the NYSDPS staff to trace a statement of fact in a finding, conclusion, or recommendation to the original source document (such as an interview, document, calculation, or analysis). It includes a computerized, cross-referenced database of all pertinent information collected during the course of the project. These working papers will be available to the NYSDPS during the course of the audit and retained by the Schumaker & Company project team for three years following the release of the final report by the NYSDPS. A CD/DVD of all working papers will be provided to Staff at completion of the project. An example showing the use of Microsoft Word endnotes for identifying source documents is provided in the following section.	♦ PMIA database records and CD/DVD of files

E. Working Paper Endnote Example

The following is an example of the use of endnotes for Schumaker & Company's working papers that allow the reader to trace statement in a sample final report to the original source document.

In the third quarter of 1993, ALLTEL reorganized its telephone headquarters staff and consolidated its Northeast and Midwest Region operations. Reorganization costs totaled approximately \$17.8 million, approximately \$4.2 million of which was allocated to ALLTEL Pennsylvania.³ Until recently, the Northeast Region in Hudson, Ohio performed the accounting functions for ALLTEL Pennsylvania. In April 1995, the Accounting functions at the three ALLTEL Telephone Operations regions (Northeast, Southwest, and Southern) were combined into one in Little Rock, Arkansas, as shown in Exhibit X-#.⁴ The current organization under the Vice President (VP), Accounting (reporting to the VP, Accounting Operations-Telephone) is composed of approximately 125 to 130 people, about 40% of whom were hired during the accounting reorganization in 1995.⁵ ATSC management believes that, in spite of the myriad of changes caused by the reorganization, it was completed smoothly, which management attributes to the quality of ATSC employees. The reorganization is seen by management as bringing "new blood, new ideas, and stronger qualifications" to the centralized group as compared to the regional accounting organizations.⁶ The reorganization mainly impacted the Accounting functions but also Treasury and State and Regulatory Access Matters departments. The reorganization allowed ALLTEL to reduce Accounting staff by 94 people, Treasury by 10, and State and Regulatory Access Matters by 17 for a total reduction of 121 people (as of a staffing count in June 1996). Reorganizing functions from the states and regions to Little Rock, Arkansas, cost approximately \$5.1 million in severance pay and relocation costs, but it saved roughly \$5.6 million in payroll plus benefits and reduced the outside auditor's fee on an annual basis.⁷

³ / Information Response 168 Pages 1-2

⁴ / Interview 36 and Information Response 168 Page 3

⁵ / Interview 47 and Information Response 169 Page 4

⁶ / Interview 47

⁷ / Information Response 438 Pages 1-3

IV. Areas and Issues for Review

As per the RFP, the management and operations audit will focus on the following elements:

- ◆ **E1: THE AUTHORITY'S CONSTRUCTION AND CAPITAL PROGRAM PLANNING IN RELATION TO THE NEEDS OF ITS CUSTOMERS FOR RELIABLE SERVICE AND THE OVERALL EFFICIENCY OF THE AUTHORITY'S OPERATIONS**
 - Corporate governance, including mission, objectives, goals, and planning
 - Executive management
 - Current and future organizational structure
 - Board of Trustees
 - Communications and control
 - Strategic planning
 - Outside services
 - Enterprise risk management
 - System planning
 - Program and project planning and management
 - Performance and results
 - Efficiency of the Authority's operations:
 - Work force management
 - Customer service
 - Transmission and distribution
 - Reliability
 - Preventive maintenance
 - Repair/replace and reactive/corrective maintenance

- ◆ **E2: THE MANNER IN WHICH THE AUTHORITY IS MEETING ITS DEBT SERVICE OBLIGATIONS**
 - Debt service management
 - Application of industry standards to manage debt
 - Receipt of necessary approvals for debt management
 - Audit of debt management practices
 - Effective of risk management techniques
 - Effectiveness of the rate making model relative to meeting the Authority's debt obligations



- Background events that led to the establishment of the Shoreham acquisition adjustment and subsequent changes to the adjustment
- Cash reserve policy
- ◆ **E3: THE AUTHORITY'S FUEL AND PURCHASED POWER COST ADJUSTMENT CLAUSE AND RECOVERY OF COSTS ASSOCIATED WITH SUCH CLAUSE**
 - Fuel and purchased power clause
 - LIPA's active and effective involvement in New York Independent System Operator (NYISO) issues and operation as well as other regional entities
 - LIPA's fuel and purchased power contract management, including PSA, Fuel Management and Bidding Services Agreement (FMBSA), and EMA
 - LIPA's fuel and purchased power cost adjustment clause Tariff Leaf 166
 - LIPA's fuel and purchased power cost recovery
 - Supply procurement and load forecasting
 - LIPA's supply procurement
 - Load forecasting
- ◆ **E4: THE AUTHORITY'S ANNUAL BUDGETING PROCEDURES AND PROCESS**
 - Capital and O&M budgeting
 - Program and project planning and management
- ◆ **E5: THE AUTHORITY'S COMPLIANCE WITH DEBT COVENANTS**
 - Compliance with all debt covenants
 - Management of debt covenant requirements

Within the context of each element, we will address the generic questions and issues, including:

1. Purpose, mission, planning, goals and objectives, and strategies
2. Functions, processes (including inputs and outputs), policies, practices, and systems
3. Organizational design
4. Staffing, responsibilities and accountabilities
5. Cost control/cost oversight/cost analysis
6. Efficiency and effectiveness
7. Results and performance measurement including how the results are used
8. Opportunities for improvements, including "best practices" (based on our past experience) that are appropriate to New York State operating environment

The audit will emphasize an assessment of LIPA's effectiveness in meeting its mission, particularly with respect to meeting its performance goals and the extent to which there are opportunities for improvement.

F. Preliminary Work Plan

As discussed earlier in this proposal, each of the key consultants will be involved in the development of the draft work plan. We will use the scope of work identified in the RFP (repeated in this section), combined with our preliminary work plan that is contained in this section, and our understanding of the business processes within learned from the kick-off presentation and orientation interviews, and combined with our consultants' knowledge and the integration of the relevant parts of other management audit work plans that we have developed over the last five years, to draft a detailed work plan for the remainder of this project.

Our preliminary work plan (on the following pages) for each of the identified areas includes the following information:

- ◆ Proposed staffing
- ◆ Work steps
- ◆ Evaluative criteria or expectations
- ◆ Potential issues or problems that could be expected:

Further refinement of this preliminary work plan and initial information requests will be performed as part of the project's activities.



E1: THE AUTHORITY'S CONSTRUCTION AND CAPITAL PROGRAM PLANNING IN RELATION TO THE NEEDS OF ITS CUSTOMERS FOR RELIABLE SERVICE AND THE OVERALL EFFICIENCY OF THE AUTHORITY'S OPERATIONS

- ◆ E1.1: Corporate governance, including mission, objectives, goals, and planning
 - Executive management
 - Current and future organizational structure
 - Board of Trustees
 - Communications and control
 - Strategic planning
 - Outside services
 - Enterprise risk management
- ◆ E1.2: System planning
- ◆ E1.3: Program and project planning and management
- ◆ E1.4 Performance and results
- ◆ E1.5 Efficiency of the Authority's operations:
 - Work force management
 - Customer service
 - Transmission and distribution
 - Reliability
 - Preventive maintenance
 - Repair/replace and reactive/corrective maintenance

Mr. Lee E. Burgess will be the *Team Lead* for this set of work plan areas.

Scope Area E1.1: Corporate Mission, Objectives, Goals, and Planning

Scope of Work

- ◆ Review and assess governance, organizational structure, missions and relationships within LIPA as they relate to the construction program planning process.
- ◆ Review organizational responsibilities for planning priorities and budgeting allocations.
- ◆ Assess the role of the Board of Trustees and executive and senior management in the development of budgeting guidelines and periodic budget reviews and approvals.
- ◆ Review controls in place to prevent outside vendor abuses.
 - The review of outside vendor transactions should include, but not be limited to, identifying material transactions between LIPA and its vendors.
 - At a minimum, the review should consider the following questions: Are there effective internal controls in place for managing and controlling levels of service and costs of services? If so, are they being applied?
- ◆ Examine LIPA's financial position and the level of its rates that are factored into the budgeting process.
- ◆ Assess LIPA'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 LIPA and National Grid/PSEG Long Island LLC management.
- ◆ Examine performance and compliance with procedures and practices related to the scope of this audit, e.g., internal controls, internal audit function, and the Sarbanes Oxley Act.

The following identifies specific scope objectives for individual sections of this work plan area.

E1.1.A: Executive Management

- ◆ Executive Management covers an evaluation of the Authority's overall corporate structure, the responsibilities and authority of the Authority's Board of Trustees and senior management, and the organization's ability to anticipate and respond to strategic issues. An effective management organization and planning process is essential to a well-managed, efficient power authority.
 - Determine if the corporate structure is sufficiently robust to adequately oversee the provision of electric service to the 1.1 million ratepayers.
 - Assess the authority the executive management exerts over its service provider, National Grid.
 - Review the formal and informal paths of communication among the executives at LIPA.

- Review and access LIPA management’s strategic planning processes, as well as contingency plans.
- Review the working relationship between executive management and the Board of Trustees, including reports shared with the Board and Board committees.
- Review management performance and compensation programs and alignment with the corporate mission, objectives and goals at all organizational levels.

E1.1.B: Current and Future Organizational Structure

- ◆ The Authority should be organized so that functional activities overseen by LIPA are provided by the vendors of the expiring MSA and the recently signed OSA in an efficient and productive manner while still providing a satisfactory level of customer service at the most reasonable rates.
 - Evaluate the major functions to determine if they are appropriately grouped to provide quality service to customers and sufficient support to operations.
 - Determine if the major functions in the new ServCo model are appropriately staffed with personnel with sufficient utility experience to be able to assess the operational effectiveness of the MSA and OSA provider.
 - Evaluate the spans of control, lines of responsibility, number of management levels, and staffing levels.
 - Determine if the LIPA/service manager organizations ensure that there is efficient utilization of resources, with no duplication of services.
 - Determine if the recent reorganization was planned well and will be monitored adequately subsequent to implementation.
 - Assess and evaluate the ServCo model being developed and implemented by LIPA.
 - Review and assess the organizational structure of the ServCo including the authority, responsibilities and duties of the joint operating committee.
 - Identify the personnel of the ServCo by source: LIPA, PSEG Long Island LLC, Lockheed Martin, etc.
 - Assess the functions, roles, reporting relationships, and responsibilities of each party in the ServCo model: LIPA, PSEG Long Island LLC, and the ServCo itself.

E1.1.C: Board of Trustees

- ◆ The Board of Trustees is responsible for developing and approving all corporate policy decisions. This review should concentrate on the level of participation and involvement of members of the Board and the Board committees.

- Determine whether the Board exercises an appropriate level of authority and responsibility.
- Review to what extent the Board participates in the development and approval of important authority policy decisions.
- Assess the Board and its role in the hiring and evaluation of the performance of the Chief Executive Officer (CEO) and other executives.
- Review the Board's committees to determine if their composition is consistent with best practices.

E1.1.D: Communications and Control

- ◆ Effective channels of communication and controls should be in place and conveyed through administrative policies and procedures.
 - Determine if an effective process is in place to communicate the result of consultants, internal audits, etc., to corporate management and to ensure that follow-up action is taken on any noted deficiencies.
 - Evaluate whether corporate management is provided with sufficient and appropriate information through reporting systems to enable them to effectively evaluate the extent to which corporate goals and objectives are being achieved.
 - Has LIPA taken measures to ensure that its operations are transparent to key stakeholders?
 - Does LIPA have a formalized process to handle customer complaints and inquiries that have not been resolved by its MSA provider, or pending OSA vendor, and the Department of State's Division of Consumer Protection?

E1.1.E: Strategic Planning

- ◆ Strategic Planning provides a roadmap of a company's overall direction for the foreseeable future. The evaluation of the strategic planning process will focus on the strategic management process at LIPA.
 - Review how well the Authority has defined the purpose and mission of the organization.
 - Determine if the Authority has an in-depth understanding of where the organization is now and where it needs to be in the future, who its customers are, and when it is time to shift to a new direction and reevaluate its purpose and mission.
 - Determine if LIPA has adequately defined the specific long- range and short-range positions it wishes to occupy.
 - Review and assess how the Authority formulates strategies.

- Determine how effectively the Authority has established objectives, formulated its strategic plan, follows through with its strategic plan, and is consistent with the defined purpose of the organization.
- Evaluate if the Authority has effectively executed the strategic plan.
- Determine the flexibility of the Authority in light of actual experiences, changing conditions, and new priorities.
- Evaluate if the Authority's information systems are sufficiently robust to provide new functionalities in light of actual experiences, changing conditions, and new priorities.

E1.1.F: Outside Services

- ◆ LIPA accomplishes its mission by outsourcing the vast majority of work involved in running its transmission and distribution (T&D) system. In the case of LIPA, this would include, but not be limited to, the vendor operating under one of the service agreements (MSA, OSA, Power Supply Agreement (PSA), or Energy Management Agreement (EMA)).
 - Review the authority and responsibility delegated to third parties in light of best management practices.
 - Ensure that operational policies and procedures are consistently followed and meet applicable legal, regulatory, and contractual requirements.
 - Review current and future cost allocation methodologies to ensure that costs are appropriately allocated, consistently followed, and meet applicable legal, regulatory, and contractual requirements.
 - Review and assess the contractual agreements regarding storm event definition, and payment for storm costs both within and external to the MSA/OSA.

E.1.1.G: Enterprise Risk Management

- In this area, the consultant should review the level to which LIPA and its MSA and OSA provider take a holistic view of the threats and opportunities facing them, with a view toward the financial commitments they make in light of those risks.
- Determine what formalized assessments (e.g., ERM) are in place to assess the risks versus benefits of capital plans the Authority has approved.
- Examine the weightings given to the variables in the risk/benefit analyses.
- Review the process employed by the Authority to assess and rank risks to the organization, including physical, financial and operations dimensions.
- Assess the variables used in the models for ERM.
- Examine and assess the steps the Authority is taking to address the areas identified as the highest risk.

- Determine if the schedule used by the Authority to update the ERM is reasonable.

Proposed Staffing

Mr. Lee E. Burgess will be the *Principal Consultant* for this area. He will be assisted by **Mr. Dennis J. Schumaker, Ms. Patricia H. Schumaker, and D. Kerry Laycock** as a *Senior Consultants*. This team will working closely with Mr. Robert Rosenkoetter. Mr. Rosenkoetter is *Principal Consultant* for the *Capital and O&M Budgeting* work plan area and will work closely with Mr. Burgess regarding financial position/rates and budgeting issues.

Work Steps

Our first task will be to examine the company's response to our initial data requests, which are tied to our evaluative criteria, expectations, and background information we already have on LIPA's operations. As we progress through this task (as with all tasks), we will begin to outline the task report into the major areas of *Background & Perspective, Findings & Conclusions*, and even *Recommendations* segments. At this early point we will already be forming hypothesis on findings that will help guide our further review and analysis. Shortly thereafter, or concurrently in some cases based on schedule and the company's ability to respond to initial data requests, we will perform orientation interviews. In the case of this work plan area, we will talk to senior executive management (CEO, COO, senior vice presidents), lead manager of internal auditing, corporate secretary, and lead manager of any strategic planning support functions. Our interview topics will broadly cover the management systems and practices within their respective scope of responsibilities (once again, broadly following our evaluative criteria and expectations), relevant documentation and reports that define these practices and how they are implemented. We will also address any initial issues that arise from our initial data review. For example, in response to requests for company strategic plans, we sometimes get financial budgeting documents. In this case, we will address with senior management if this is representative of their strategic planning efforts, or if there are other efforts taking place.

Our next step will be to update our work plan to add or delete additional criteria, document requests, interviews, analysis, issues, and report outline. This revised work plan will form the basis for additional information requests and interviews. While field work progresses, we will be continually adding to our task report. In fact, it is our practice to update our task report after each interview and document reviewed/analysis completed. We should note that documentary evidence will form the basis for our endnote citations. Interviews are important, but no important piece of information or finding will be based solely on interviews. Also, as field work progresses, document requests will become narrower and more specific; even to the extent of confirming a specific fact that resulted from an interview.

When the field work is completed, the draft task report will be reviewed by project management and a professional editor. Once approved, it will be submitted to NYSDPS staff for comments. The *Lead Consultant* will respond to comments, make necessary changes, and perform additional field work, if necessary, and resubmit the task report to project management/editor. The task report will then be submitted to LIPA for



factual comments. In some cases, if allowed by NYSDPS staff, we will sit down with key/senior management and confirm important facts and findings prior to submission of the task report.

Specific work steps for this area include:

- ◆ Review and evaluate the corporate structure and identify decision-making processes used by LIPA, the parent company, down to and including senior management and Board of Trustees) of the subsidiaries to ensure that the interest of NYS customers are protected and compliance with NYS policies, laws, rules, regulations, opinions, and orders.
- ◆ Review statements of company strategy, goals and objectives: their form, when prepared, by whom; how frequently reviewed, changed, and updated; and how they are communicated to the employees. Assess the use and applicability of specific measurable goals, metrics, key performance indicators, etc. to achieve the corporate mission and objectives, and the performance improvement process at successive levels of management goals and objectives to each of the core business segments.
- ◆ Review and evaluate goals for modernization and implementation of transmission and distribution systems, including compliance with the Energy Independence and Security Act of 2007 and consideration of smart grid technologies.
- ◆ Review and evaluate decision-making processes and practices relating to the purchase and sale of significant operating segments.
- ◆ Identify the strategy with regard to organizational and rate structure of LIPA as a means to identify if it is operationally efficient and cost advantageous for NYS ratepayers.
- ◆ Identify the long-term strategy LIPA.
- ◆ Review the nature and extent of involvement of individual senior managers and others in the strategic planning and budgeting processes, including input from the Board. Review the clarity of understanding of individual responsibilities for these processes. Evaluate whether department and core business unit objectives are appropriately and clearly linked to goals and performance measures for individuals.
- ◆ Assess the extent to which goals and objectives are translated into measurable tasks and how well the feedback from actual results is incorporated into the efforts to achieve these goals and objectives.
- ◆ Assess the integration of the strategic planning process with other company planning processes, including financial planning, construction program planning, marketing planning, and budgeting, technology, external relations as well as core business unit planning.
- ◆ Evaluate whether the strategic planning process continually captures customer and all key stakeholders interests/issues/needs and results in the appropriate internal changes.

- ◆ Determine how effectively human resources programs (such as management performance and compensation programs) are linked to business strategy; assess how this function is leading line managers through organization (management) changes.
- ◆ Review the role of the Board of Trustees vis-à-vis internal controls, internal audit function, and the Sarbanes-Oxley Act, as appropriate.
 - Review selection and composition of the Board of Trustees (Board) and its policies and practices for selection of Board members as well as retirement age, tenure restrictions, and other policies relative to Board membership.
 - Review all Board committees and examine their duties, frequency of meetings, and salary/fee structure.
 - Review frequency of meetings and agendas of Board of Trustees and committee meetings.
 - Review the Code of Conduct/Ethics policy applicable for Board members.
- ◆ Review Code of Ethics adopted by the senior financial officers, including provisions for:
 - Honest and ethical conduct
 - Full, fair, accurate, timely, and understandable disclosure in reports and documents
 - Compliance with applicable governmental laws, rules, and regulations
 - Prompt internal reporting of code violations
 - Accountability for adherence to the code
- ◆ Identify any policies and procedures supporting implementation of the Code of Ethics at LIPA.
- ◆ Review internal controls over financial reporting and disclosure.
- ◆ Review certifications by the CEO and CFO that they:
 - Are responsible for disclosure controls and procedures
 - Have designed (or supervised the design of) these controls to ensure that material information is made known to them
 - Have evaluated the effectiveness of these controls each quarter
 - Have presented their conclusions regarding the effectiveness of these controls
 - Have disclosed to the Audit Committee and the independent auditors any significant control deficiencies
 - Have indicated in the filing any significant changes to controls
- ◆ Determine organizational responsibilities for planning priorities and budget allocations.
 - Determine the roles of all organizations involved in planning and developing budget assumptions.
 - Assess the appropriateness of organization responsibility

- ◆ Review the details of the Board of Trustees and executive and senior management's involvement in the capital and O&M budgets and the budget processes.
 - Examine the roles of and relationships between regional and centralized planning and budgeting functions.
 - Determine the budget task location of all budgeting functions.
- ◆ Determine the relationship between LIPA's financial positions and the level of their rates with the budgeting process.
 - Review LIPA's financial positions by reviewing credit agency reports and ratings and external auditor's notes and comments.
 - Verify that current and projected rates are reflected in the budgets.
 - Assess the impact of the financial position and the level of its rates on the current budget effort.
- ◆ Assess if a clear risk management strategy exists to address potential risks and resultant losses.
- ◆ Review LIPA's risk management policies and procedures and determine how extensively they address potential risks to the Authority (financial and operational); review the use and robustness of any formal models.
- ◆ Determine the effectiveness of LIPA's risk management policies and practices.
- ◆ Evaluate the current risk management strategy and review relative reliance placed on loss prevention, self-assumption of risk, and insurance.
- ◆ Review the depth of formalized assessments and determine if weightings are appropriate
- ◆ Determine the level of review, input, and reporting/assessment from Board of Trustees, senior management, and appropriate middle management representatives.
- ◆ Determine LIPA's process for incorporating MSA/OSA risk assessment processes into their own risk assessment process.

Evaluative Criteria or Expectations

- ◆ A documented strategic plan exists that clearly establishes goals and objectives. These goals should be quantified and be directly supported by departmental goals documented in business plans. Performance indicators should reflect difficult, but achievable, levels backed by analysis and past achievement. Resources necessary to achieve goals (financial, human resources, inter-departmental support, etc.) should be detailed and reflected in budgeting documents.
- ◆ A reporting structure should be in place that routinely measures actual performance to goals with variance analysis and action steps.
- ◆ The strategic plan should be integrated with all other plans, e.g. financial/capital budget plans, resource plans, human resource plans, etc.

- ◆ The Board of Trustees should number from 10 to 16 directors depending on size of corporation and extent of their operations. A majority of directors should be independent (not employees or with any material financial interest in the corporation beyond their director's pay and stock position). Preferably all directors should be independent except for the Chief Executive Officer.
- ◆ Board committees should include, at a minimum, an Audit Committee and a Nominating Committee. Both committees should be comprised entirely of independent directors. The Chair of the Audit Committee should have extensive experience in financial and/or auditing operations. Other committees can include Compensation, Risk Management, and Operations. All committees must have written charters that clearly define roles and responsibilities.
- ◆ The Board should be diverse in terms of experience. All important aspects of the corporation's business should be reflected somewhere within the experience of the independent directors. No director should be serving on more than three other outside boards. Director candidates should be recruited and vetted through the Board Nominating Committee.
- ◆ The Board as a whole and the Audit Committee should meet quarterly, at a minimum. A portion of these meetings should be conducted in executive session. The outside financial auditors and the company's internal auditors should report directly to the Board Audit Committee. The Audit Committee and Board as a whole should have the authority and budget to hire outside expertise/consultants at their discretion. Senior company management should be routinely invited to participate/make presentations/answer questions from the directors in Board meetings. The financial and internal auditors should meet with the Audit Committee in executive session at least once a quarter.
- ◆ The Board should review and approve strategic plans and financial/budgeting plans. Board packets should routinely include reports on corporate performance (in support of the strategic plan) and status of key issues.
- ◆ The company should have a documented Ethics/Code of Conduct policy that applies to all directors, senior management, employees, and those doing business with the company (e.g. vendors and those providing professional services). There should be an ongoing ethics training process that covers the entire organization. Directors and senior management should periodically provide signed financial disclosure forms. An outside agency should provide a conduit for allegations of ethical violations and processes for making allegations should be clearly publicized in the Ethics Policy manual and company internal communication vehicles. Allegations should be investigated, investigations and the resulting actions should be documented, and allegations should be tracked in a data base (for analysis on trends). The Board should approve the Ethics/Code of Conduct policy and be apprised of any serious allegations and the results of investigations. The Corporate Secretary or Legal Department should have the authority and budget to hire outside resources to conduct investigations of allegations.

- ◆ There should be a robust process in place for tracing financial and information flows and control points and analysis on material weaknesses. Action steps should be documented to strengthen these weaknesses and regular reports should be made to the Board. This process is usually conducted by a dedicated internal controls group within the financial department or by the internal audit function.
- ◆ All technical and administrative procedures should be documented and a control process should formally exist to initiate, review, and revise procedures with appropriate signoffs. Procedures indexes should be maintained in a database. All procedures should be periodically reviewed and updated. Preferably all procedures will exist in electronic form.
- ◆ Although LIPA is not a publicly-traded corporation, it should be able to readily demonstrate substantive compliance with all provisions of the Sarbanes-Oxley Act and relevant requirements of the New York Stock Exchange.
- ◆ A robust enterprise risk management program should be an integral part of LIPA's strategic planning process.

Potential Issues or Problems That Could Be Expected

- ◆ Increasingly we see strategic planning being dominated by financial figures. Although basic corporate goals and missions may be loosely defined (e.g. be the premier electric utility in the eastern United States), there is often no integration of corporate goals to objectives (most should be quantified) drilled down into business plans. Specific performance objectives, to the extent they exist, are not tied into corporate objectives. Often there is no basis for determining these performance objectives and often they are easily achieved.
- ◆ The internal audit function rarely reports directly to the Chairman of the Audit Committee. Usually it reports administratively (sometimes even directly) up through company management (usually the CFO). This presents a situation whereby undue influence could be exerted on the independence of the internal audit function. Although SOX stops short of requiring this direct reporting relationship to the Board, it expresses the preferred situation that internal audit function report through the same line as the external financial auditor (which in almost all cases reports directly to the Board Audit Committee).
- ◆ Organizations often focus almost exclusively on profitability and will cut back on expenses in areas that don't affect the bottom line in the short term. These areas often include external relations, infrastructure upgrade projects (reliability), customer service, human resources, and conservation, among other areas. A strategic plan that focuses mainly on financial budget figures is a tip off to this problem.
- ◆ Risk management is often limited to financial hedging practices and do not address all aspects of the organization, including operational risks. The Board of Trustees and senior management may not address risk on a formal, periodic basis, or only when a problem arises.

- ◆ There is no formal, periodic organization review process. Organization changes often come based on management promotions and/or strengths/weaknesses, or specific changes in the environment (e.g. need for cost cutting).
- ◆ Board of Directors/Trustees as a whole lacks experience in some areas. The Board Audit Committee may have too much workload necessitating additional committees or rearranging of responsibilities (e.g. risk management).
- ◆ Administrative policies are not formally, periodically reviewed.
- ◆ Internal communication processes are haphazard.



Scope Area E1.2: System Planning

Scope of Work

- ◆ Review and assess infrastructure planning and engineering functions.
- ◆ Evaluate priorities, guidance and other instructions for evaluations, tradeoffs and decision making, including an asset condition and management process and linking asset management decisions (e.g., predictive failure analyses) to improve reliability and performance.
- ◆ Assess the development of system forecasts and infrastructure requirements.
- ◆ Review consideration of other load and infrastructure factors, such as advanced metering and energy efficiency initiatives, in the planning process.
- ◆ Determine processes for identifying, developing, and justifying the need for major projects (e.g., electric lines, etc.).
- ◆ Assess the process and criteria for making decisions regarding replace versus repair, including how the overall construction program planning process is affected.
- ◆ Review planning processes for: (a) reliability versus new business tradeoffs, and (b) regional versus central planning dynamics.
- ◆ Determine the 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.
- ◆ Review the 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.

Proposed Staffing

Mr. Dennis J. Schumaker will be the *Principal Consultant* for this work plan area and will be assisted by **Mr. Eugene Johnson** as a *Senior Consultant* in this area.

Work Steps

The *System Planning* work plan area addresses activities in the delivery of electricity to customers and the servicing of the customer account. As such, it includes activities traditionally referred to as system operations, operations and maintenance, and engineering and construction. The primary focus of our review is the distribution operations activities of LIPA. However, to the extent that transmission assets are also operated and maintained by the same resources as distribution assets, from a workload assessment, we will need to review both transmission and distribution activities.

Our evaluation will include a review of the organization and staffing of the system planning, engineering and construction groups in relation to its ability to perform its chartered responsibilities in an effective and timely manner. This review will investigate work and information flows, staffing levels over time, work order and work assignment procedures, and crew utilization and scheduling techniques.

We will investigate and evaluate the current practices of LIPA relative to the use of decision support systems and information technology in the management of electric assets to determine:

- ◆ To what extent a risk management approach has been taken to distribution system operations, maintenance, and construction.
- ◆ Whether the processes used by LIPA are consistent with currently accepted levels of technology for the electric utility industry in general.
- ◆ Whether these processes are properly designed to support the LIPA organization in providing superior service to its customers.
- ◆ Whether LIPA attempts to tie expenditures to performance levels.

Additionally, we will evaluate the engineering design and construction management functions as these are key areas to the efficient and effective operation and construction of the network that is the basis for the provision of reliable electric service to the customer. The engineering design and planning function must be capable of determining with accuracy the future requirements for electric service and making the proper provisions for same through the timely conceptualization and design of future electric facilities. Following this step, it is the responsibility of the construction management group to bring these electric facility designs to fruition in accordance with the established schedules, budgets, and quality parameters.

As specified in the RFP, the scope elements and components of investigation listed at the beginning of this work plan area are to be included in the audit. To fulfill the requirements of this portion of the LIPA audit, Schumaker & Company would follow, but not be limited to, the following work steps:

- ◆ Review decision support systems used for identifying construction projects – i.e. construction program planning.
 - Attributes used in decision making
 - Integrations with other technologies – work orders, outage management, GIS, facility attributes, etc.
- ◆ Evaluate the decision support systems used by LIPA in identifying construction and maintenance activities relative to transmission and distribution assets.
- ◆ Assess the use of internal data (contained within the various company databases) in supporting operations and providing adequate and timely information for rational management decision making regarding transmission and distribution assets.



- ◆ Review the information systems that support the distribution operations, including, but not limited to:
 - Repair replacement decision making tools
 - Outage management system
 - Workforce planning, scheduling, and control
 - Materials management systems
 - AM/FM system
 - Automated dispatching
- ◆ Evaluate organizational structure and staffing of all functions responsible for the engineering design and planning of transmission and distribution assets.
- ◆ Review LIPA's distribution load models, econometric correlations, and forecasting technologies.
- ◆ Review the company's procedures for preparing long-term demand forecasts, including the adequacy of modeling techniques and staffing and the use of externally available data.
- ◆ Determine if there is a long-range (five years) plan with specific quantifiable goals for years one and two, and in more general terms for years three, four, and five.
- ◆ Assess the distribution system monitoring process used to formulate system design and engineering characteristics.
- ◆ Review engineering design and construction standards.
- ◆ Review planning engineering process and procedures.
- ◆ Review ongoing training programs for design and planning engineers.

Evaluation Criteria or Expectations

- ◆ The overall organization of the various functions related to electric transmission and distribution should be efficient and effective with clearly defined roles and responsibilities, staffing levels that are workload driven, and adequate consolidation of activities
- ◆ Tools for construction program planning should be incorporating risk, cost benefits, and various other attributes in the decision making process
- ◆ Processes and procedures are clear and consistent with systems in place to insure consistent application of the guidelines and procedures across similar departments within LIPA.
- ◆ LIPA should have a methodology to review those processes on a regular basis to insure consistent application and that they benchmark themselves against the best practices in the industry.
- ◆ Use of information technology supports LIPA by providing timely and complete management information for decision making relative to transmission and distribution assets.
- ◆ Current technology is being used and emerging technology is being assessed for incorporation as appropriate.

- ◆ The overall organization of the various functions related to the engineering planning and design of electric transmission and distribution facilities should be efficient and effective with clearly defined roles and responsibilities, staffing levels that are workload driven, and adequate consolidation of activities. Adequate resources are utilized to meet requirements.
- ◆ Analyses of overall distribution system performance indicators are favorable.
- ◆ Project management systems should provide timely, useful information for managing construction and major maintenance projects.
- ◆ Field force supervision is knowledgeable and uses project management information for managing construction projects.
- ◆ Sound decision-making processes should be in place with regard to contracting.
- ◆ The contractor acquisition process should be equitable and reasonable and should include thorough vendor identification and valid bid solicitation and analysis activities.

Potential Issues or Problems That Could Be Expected

Some of the potential areas where Schumaker & Company has seen issues or problems at various utilities include the following:

- ◆ There is not an active and ongoing effort to identify electric utility best operating practices nor have they been incorporated into daily operations.
- ◆ There is not an active and ongoing effort to identify new technological advances and to incorporate this advanced technology into the distribution network and the daily operations of the company.
- ◆ Changes to the company's customer base (growth, shrinkage, migration) have not been taken into proper account when assessing the health of the distribution network and performing planning and design for the future.
- ◆ Sufficient capital budgets and manpower resources are not available to properly address the distribution network planning and upgrade efforts.
- ◆ A company has not responded to the declining industrial base and population of its service territory, such as that found by LIPA in its service territory.
- ◆ Proper predictive failure analysis procedures are not run to properly evaluate the reliability of the distribution network.



Scope Area E1.3: Program and Project Planning and Management

Scope of Work

- ◆ Review the process for prioritization and approvals for planned projects over various time horizons.
- ◆ Evaluate program and project planning, design, estimating, engineering, costing, scheduling and execution.
- ◆ Assess the planning and management of materials, equipment, transportation and other logistical support for programs and projects.
- ◆ Review the analysis and decision-making for tradeoffs to optimize the use of in-house workforce versus contractor labor.
- ◆ Assess LIPA's contractor and engineering bidding practices.
- ◆ Review the planning and management of construction contractor projects.
- ◆ Assess the quality assurance and quality control at the program and project level.
- ◆ Examine LIPA's contractor management, project/program management, including accountability, goals, objectives, and performance measurement.

Proposed Staffing

Ms. Patricia Schumaker will be the *Principal Consultant* for this work plan area and will be assisted by **Mr. Dennis J. Schumaker** as a *Senior Consultant* in this area.

Work Steps

- ◆ Review program and project methodologies in place for various LIPA organizations.
- ◆ Review and assess how programs and projects are prioritized and approved over various time horizons.
- ◆ Evaluate how program and project planning, design, estimating, engineering, costing, scheduling, and execution are performed.
- ◆ Review and assess how materials, equipment, transportation and other logistical support are planned and managed for programs and projects.
 - Review purchasing policies, controls, and procedures as implemented and used by LIPA.
 - Assess specific programs, procedures, and practices used to meet materials and service quality, price, and delivery objectives, including:
 - Material specifications, standards, and quality assurance practices
 - Vendor/contractor evaluation criteria and performance histories

- Vendor/contractor bidding and selection procedures
 - Contracted services, by type and magnitude
 - Blanket and other major commodity purchasing practices
 - Emergency, will call, and petty cash purchasing practices
 - Requisitioning practices
 - Project procurement practices
 - Procurement engineering and value analysis practices
 - Information systems used to evaluate and improve procurement performance
 - Trafficking, shipping, expediting, salvage and claims practices
- Evaluate systems in place for monitoring vendor product quality and compliance with specifications and schedules.
 - Evaluate use of materials requirements planning (MRP) techniques. Determine what efforts, if any, have been made in working together with vendors for supplying inventory items on an immediate or just-in-time (JIT) basis.
- ◆ Identify how tradeoffs are analyzed and decisions made to optimize the use of in-house workforce versus contractor labor; evaluate if reasonable.
 - ◆ Identify how contractor and engineering bidding practices are performed; evaluate if reasonable.
 - ◆ Identify how construction contractor projects are planned and managed; evaluate if reasonable.
 - ◆ Assess how quality assurance and quality control at the program and project level are handled.
 - ◆ Assess how contractor management and project/program management are performed, including accountability, goals, objectives, and performance measurement.

In our work, Schumaker & Company will review how each of these topics are performed by LIPA against best practices, as discussed further in the *Evaluative Criteria or Expectations* section of this work plan area.

Evaluative Criteria or Expectations

- ◆ Programs and projects, including those having various time frames, are formally prioritized and approved with justification included that supports decisions made.
- ◆ Program and project planning, design, estimating, engineering, costing, scheduling, and execution activities are planned and managed efficiently and effectively based on sound and reasonable policies, processes, and procedures. These activities are supported appropriately by technology systems.
- ◆ Quality assurance and quality control activities are regularly performed, including tracking costs, work units, and work quality for specific programs and projects, including variances. Activities are performed to minimize variances so as to improve the cost control, efficiency/productivity and work quality of programs/projects.



- ◆ Materials, equipment, transportation and other logistical support for programs and projects are planned and managed efficiently and effectively based on sound and reasonable policies, processes, and procedures.
- ◆ Analysis of tradeoffs between the use of in-house workforce versus contractor labor is adequately performed and decisions are made based on sound and reasonable policies, processes, and procedures. These activities are supported appropriately by technology systems.

Potential Issues or Problems That Could Be Expected

In the course of many audits, Schumaker & Company has identified a number of key issues related to program and project management. We will pay close attention to this in the course of our review of LIPA, as they are potentially significant issues for a company. Frequently we see:

- ◆ Little importance is placed by senior management on using program/project management principles.
- ◆ Policies, procedures, and practices for tracking, reporting, and managing programs/projects are informal; therefore, employees do not follow best practices espoused by leading organizations, such as *Project Management Institute* principles.
- ◆ The lack of a standardized program/project methodology exists across the organization; without such standardization, management is unable to compare program/project progress and results.
- ◆ Few employees have the background to really understand how to manage programs and projects.
- ◆ Project planning, design, estimating, engineering, costing, scheduling, and execution practices are not best industry practices.

Scope Area E1.4: Performance and Results Management

Scope of Work

- ◆ Assess 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.
- ◆ Determine the roles and responsibilities of the Board of Trustees in this feedback loop.
- ◆ Assess management accountability for performance improvements, e.g., cost savings and productivity gains anticipated from specific capital and operations and maintenance (O&M) (referred to as Operations in LIPA's budget) programs and projects, and specific corporate goals.
- ◆ Review goals, key performance indicators, and metrics, as well as any additional performance measures or indicators that are used to facilitate attainment of the corporate mission, objectives and goals, and will help improve performance.
- ◆ Assess LIPA's participation in benchmarking studies for identifying and developing performance targets.
- ◆ Evaluate LIPA's change management and continuous improvement processes, and any impediments that might constrain performance improvements and necessary changes.
- ◆ Review compensation and performance metrics.

Proposed Staffing

Mr. Lee E. Burgess will be the *Principal Consultant* for this area. He will be assisted by **Ms. Patricia H. Schumaker** as a *Senior Consultant*. This team will work closely, however, with all team members who will provide input as to the type of performance measures used (or should be used) within LIPA.

Work Steps

Performance measurement and reporting is based, to a large part, on the identification and reporting of what many refer to in the industry as key performance indicators (KPIs). The naming of these indicators may vary with each utility, such as corporate performance indicators, performance metrics or measures, or scorecard indicators, but the management process surrounding the indicator is the same. These indicators are of two types:

- ◆ *Strategic Indicators* – Indicators that directly measure the progress of a strategic objective of an organization.
- ◆ *Operational Indicators* – Indicators that directly measure the results of operational activities that, although not necessarily of a strategic nature, are important indicators for measuring the efficiency or effectiveness of a business process.

Strategic objectives are attempting to measure the change in an organization, whereas operational indicators are measuring the ongoing efficiency and effectiveness of ongoing business processes. Both indicators will need to be assessed in our review.

Our approach to addressing the development of KPIs is based on two fundamental thoughts:

- ◆ The development of strategic KPIs that integrate and support LIPA's strategic plan – As with any organization, there are many items that can be measured, but the overriding questions to be answered are:
 - How does the KPI support the overall strategic plan for the organization?
 - What is the cost (new system development in the case where the data is not readily available) for developing the KPI relative to the impact on the strategic goals and objectives?
- ◆ The development of operational KPIs that are based on sound, practical measures that have proven useful at other utilities across the country
 - How does the KPI support the operational efficiency and effectiveness for the organization?
 - What is the cost (new system development in the case where the data is not readily available) for developing the operational KPI to measure efficiency and effectiveness?

Clearly if the KPIs in an organization do not align with the corporate goals the system is failing. Goals, objectives, and key performance indicators, and associated results should be easily understood by the personnel that they measure. LIPA needs to be looking outside their organization to ensure a continual process improvement to a reliable and safe distribution system.

Over the last 25 years, Schumaker & Company consultants have been developing a database of KPIs that we have seen implemented at various electric, gas, water, and telecommunications companies at which we have consulted. In the last five years, much of this information, and other information, has been collected and maintained at the Schumaker & Company data center in a knowledge management application specifically designed for Schumaker & Company.

Scope Area E1.5: Efficiency of the Authority's Operations

This area includes a review of staffing levels of LIPA and the providers of all services to LIPA. Optimizing the utilization of human resources is a critical component of the effective management of any organization. Departmental or functional areas in a utility that generally offer the greatest cost savings opportunities relative to workforce management include: customer service, T&D operations, and construction. A significant component will be an analysis of the major information systems that support the efficiency of the organization, and its communications ability. Therefore, an objective of this review is to evaluate the effectiveness of the systems to ensure their effectiveness in comparison to the expectations of today's consumers with respect to accuracy, timeliness, and ease of access. This study should include an analysis of the interoperability of the systems, the openness of the architecture and scalability, and flexibility for new functionalities to be added. While the information systems are operated by National Grid on behalf of LIPA, this review needs to determine the adequacy of existing systems, the plans for any conversions once the MSA with National Grid expires and the OSA with PSEG Long Island LLC go into effect on January 1, 2014, and determine what safeguards LIPA has put in place to ensure a smooth transition.

Scope Area E1.5.A: Efficiency of the Authority's Operations - Work Management

- ◆ Review the planning, conversion, and execution of programs and projects into short-term and day-to-day work.
- ◆ Study and assess work management systems that are used to schedule and manage field crews, including equipment, transportation, and materials. Determine the age and usefulness of the systems; the extent to which these systems interface with other major operating systems, and the availability of information from them to disseminate to the public.
- ◆ Assess the deployment of mobile technology to the outside workforce, and adequate customer information to customer contact individuals.
- ◆ Assess management of program and project schedules on a day-to-day basis.
- ◆ Review the processes for translation of information about rework, failures, repair history, etc. into corrective actions, infrastructure aging analysis, and repair versus replace decisions.
- ◆ Assess the feedback of work management systems into performance improvement opportunities.
- ◆ Study and assess the KPIs established by and/or reported to LIPA.
- ◆ Determine if there are adequate systems and procedures in place to provide pertinent historical data to be used in analyzing work volumes and staffing levels.
- ◆ Review the Supervisory Control and Data Acquisition (SCADA), work management, and outage management systems to determine if they are effective in identifying trends in workload levels, productivity, utilization, and service levels.

Proposed Staffing

Mr. Eugene Johnson will be the *Principal Consultant* for this work plan area and will be assisted by **Mr. Dennis J. Schumaker** as a *Senior Consultant* in this area.

Schumaker & Company brings extensive experience in workforce management. The assigned consultants offer a unique combination of operational and human resource management perspectives. They offer extensive analytical capabilities to assess workforce productivity and efficiency. More importantly, they understand the drivers of workforce productivity and efficiency and can identify the root causes of problems and recommend appropriate improvement strategies.

Work Steps

This audit process will determine if there are any gaps in the purpose of workforce management and its mission. It is critical that metrics are in place to measure and improve the work management system. Workforce management encompasses not only completion as scheduled, but the quality of the installation and its impact to the company's overall goals. Workforce management spans across multiple departments; therefore, responsibilities should be well defined and measured. This is always an area of concern, because the workforce management area typically does not have direct line responsibility to complete the work. At the highest level, the workforce management area of the audit should answer four broad questions:

1. Is the company making efficient use of its workforce and able to assure high quality service and reliability?
2. Is the company making adequate investment in its human capital to assure performance and meet future needs?
3. Is the company committed to quality improvement and are its employees fully engaged in the effort?
4. Is the company clear about its future goals and can it assure the availability of a skilled workforce?

It is not possible to evaluate workforce management independent of operational performance. Thus, our approach begins with a review of operational metrics followed by a number of reviews of human capital metrics. Our aim is to identify the relationship between operational performance and workforce management practices. High or low performance is often (but not always) a function of one or more workforce management issues. Specifically, we will approach this assessment using a ten-step process.

1. Operational metrics review: We begin our assessment of workforce management by looking at key metrics related to service quality and operational efficiency. These include customer satisfaction, response times, first call resolution rate, outage rates, restoration times and other factors that may be affected by workforce management practices.
2. Human capital metrics review: Here we will examine key metrics related to the selection,

development and management of the company's human capital. We look at macro-level metrics such as revenue per employee, human capital value added, employee development costs per employee, and total compensation to revenue.

3. We look at standard workforce management/human resources metrics, such as staffing metrics, turnover, training and development rates and outcomes, career development, competency levels, employee survey data, labor relations measures such as grievance rates, and other relevant data.
4. In many cases, our review is limited by the availability of data. Many companies simply do not track this information. Where possible we try to capture it from available systems (even if it has not been tracked by the company), but often the lack of metrics is a key finding in our reports.
5. Workforce management systems review: Here we examine the integration of all manual and electronic systems used for workforce management. This includes the human resources information system, the timekeeping and job costing system, the workforce scheduling system, the leave administration system, the learning management system, the work management system, project management methods and any other relevant system that may be in use. We are particularly interested in number of systems, the quality of data in the system, the usefulness of reports from the system, the ease of generating useful reports and the degree to which the systems are fully utilized.
6. Workforce practices and quality improvement processes review: In this review, we are looking at how the company selects, develops and deploys its human capital. In addition, we are looking at the quality improvement processes and the degree to which the workforce is fully engaged in this effort. When looking at these practices and processes, we pay close attention to the degree to which they are integrated into the everyday workings of the company. Too often, implementation of best practices fails to achieve the desired results because of lack of resources and resistance to change. In addition, the role of front line supervisions is critical and in our interviews we pay close attention to how they *actually* manage.
7. Workforce planning review: In this review, we examine the degree to which the company is able to anticipate future needs and assure the availability of a skilled workforce. We pay close attention to the degree to which the human resources function is aligned to the short and long-term objectives of the company. This includes a clear understanding of the number and type of employees needed for the future of the company. Can the company describe the workforce of the future and what is it doing to assure its availability?
8. While most companies have an executive succession plan, we look for workforce planning for all positions. In particular, we are interested in the degree to which the company is managing knowledge loss risk and adapting to changing workforce demographics.
9. Identification of workforce management and planning issues: Upon completion of our interviews, including field crew visits and observations, and data collection, we examine the relationships between company performance and workforce management practices. We will seek to answer the questions posed in the RFP (listed above) as well as others that emerge in the course of our assessment.

10. Development of findings and recommendations: Based on our clarification of the workforce management and planning issues, we develop specific findings that point to both weaknesses and areas of outstanding performance. Where weaknesses are noted, we will provide specific recommendations for improvement.

Evaluative Criteria or Expectations

Please refer to *Potential Issues or Problems That Could Be Expected* section.

Potential Issues or Problems That Could Be Expected

In the course of many audits, Schumaker & Company has identified a number of key issues related to workforce management. We will pay close attention to this in the course of our review of LIPA as they are potentially significant issues for the company.

- ◆ *Lack of planning and preparation for aging workforce:* Utilities rely on the availability of a highly skilled and experience workforce. It is well documented that average age of utility employees is higher than for the workforce in general. This aging workforce combined with generous retirement benefits will lead to the highest level of employee retirements ever seen. The available pool of qualified workers appears to be shrinking and young employee expectations are dramatically different than those of older workers. The risk to utility performance cannot be underestimated. The loss of institutional knowledge and the inability to assure an adequate staffing level could have enormous consequences for a utility and its customers. Most studies show that companies are aware of the problem but have done little to prepare for it. Audits performed in recent years by Schumaker & Company confirm this.
- ◆ *Obsolete job definitions:* New technology, quality improvement processes and changing employee expectations all dramatically change the way people perform their jobs. Unfortunately, the experience of Schumaker & Company is that utilities tend to operate with obsolete job definitions that limit flexibility, efficiency and employee utilization. The coming high level of retirement discussed above presents a great opportunity for utilities to define the workforce of the future that is more technologically skilled and more flexible in its deployment.
- ◆ *High employee turnover at customer contact points:* Customer service jobs tend to be considered low skill and tend to have low pay. While these jobs may indeed require lower technical skill, they tend to be stressful and require broad knowledge of company operations. The result is often dissatisfied employees who leave as soon as a better opportunity arises. Many companies fail to appreciate the direct and indirect cost of employee turnover and its potential effect on company performance. Schumaker & Company has important insights into the workforce management practices that can support or hinder performance in customer service.
- ◆ *Ineffective absence management:* The combined effect of utility work rules, labor contracts, employment practices and company culture lead to high levels of employee absenteeism. Schumaker & Company finds that utilities often accept this as the norm or feel there is little

they can do to address the problem. Unfortunately, with rising labor costs and demands for efficiency, utilities can no longer afford to ignore this problem.

- ◆ *Lack of setting challenging expectations for job performance:* Most employees strive to perform to levels of expectations communicated by their supervisor or manager. A reluctance by managers to establish challenging expectations results in sub-optimal performance.
- ◆ *Lack of metrics:* While most utilities capture significant operational performance data, they often have very limited human capital and workforce management data. The lack of performance metrics in this area is a common finding in Schumaker & Company audits.
- ◆ *Disconnect between workforce management systems, quality management and performance management (including employee development):* Many companies tend to think of workforce management in terms of work management systems (task definition and work assignment). Schumaker & Company takes a broader view of workforce management and looks at how information from a range of systems can be integrated to more effectively develop and deploy the workforce.



Scope Area E1.5.B: Efficiency of the Authority's Operations-Customer Services

Scope of Work

This area will review LIPA's customer service operations, including complaint handling, customer service support systems, billing, outreach, and customer communications.

- ◆ LIPA's processes for handling customer complaints and inquiries that have not been resolved by its MSA/OSA provider and/or the Department of State's Division of Consumer Protection, and for analyzing and reflecting feedback from customers.
- ◆ Review the adequacy and efficiency of customer information and customer accounting systems used to support customer service operations. Evaluate the extent to which these systems adequately support:
 - (1) LIPA's technical business needs and processes including interfaces with other systems and external service providers
 - (2) compliance with state laws and regulations
 - (3) achievement of customer service goals
- ◆ Review LIPA's overall ability to provide timely and accurate bills, and assess its internal goals for billing accuracy.
- ◆ Evaluate LIPA's outreach efforts for presentation of information, explanations regarding rate changes, and decision-making on major policy issues.
- ◆ Assess the effectiveness of LIPA's incoming and outgoing communication with customers, including the use of advanced technologies.

Proposed Staffing

Mr. D. Kerry Laycock will be the *Principal Consultant* for this work plan area and will be assisted by **Ms. Patricia H. Schumaker** as a *Senior Consultant* in this area.

Work Steps

We evaluate the customer service practices, both to internal and external customers. The evaluation includes identification of past, current, and anticipated future customer service problem areas and recommended strategies to improve service delivery. Among the areas or issues to be addressed in this examination are the capabilities and effectiveness of customer information and billing systems compared to systems used by other comparable companies and the training of customer service personnel in system utilization, and the reasonableness of staffing levels and overall performance of a call center, including validation of telephone access statistics, and appropriate use of interactive voice response (IVR) equipment and telecommunications technology in general. LIPA provides an essential service to its customers – and must provide this service in a prompt, accurate, and responsive manner. Planning,

organization, procedures, and philosophy are all essential components in delivering appropriate and effective customer service. Effective customer service operations act as a bridge, serving the needs of both the utility's external ratepayers and internal departments. As such, we will seek answers to the following questions:

- ◆ Are the customer service center(s) appropriately configured and adequately staffed for the level of telephone inquiries and customer visits?
- ◆ Do customers who contact LIPA with a question, complaint, or request receive a prompt, courteous, consistent, timely, and accurate response?
- ◆ Are formalized credit and collection procedures in place?
- ◆ Are special programs for payment-troubled customers available and managed effectively?
- ◆ Is information from customer complaints collected and used to identify the underlying root causes of customer questions and problems?
- ◆ Are customer service standards utilizing both quantitative and qualitative measures established?
- ◆ Is there a visible and formal appeal process through a review officer within LIPA for responding to customers who remain dissatisfied after a front line contact?

As specified in the RFP, the scope elements and components of investigation listed at the beginning of this work plan area are to be included in the audit. To fulfill the requirements of this portion of the LIPA audit, Schumaker & Company would follow, but not be limited to, the following work steps:

Call Center Operations and Support Systems

- ◆ Assess the use of quality measures, including lost calls, speed of answer, customer complaint surveys, excessive individual on-line or off-line, equipment downtime, and call monitoring.
- ◆ Determine whether the current customer telephone configuration, technology, and the locations and number of dedicated personnel provide optimal customer service while effectively containing total telecommunications costs.
- ◆ Review existing data collection procedures and classification categories regarding customer complaints in terms of usefulness, actionability, comprehensiveness, and exclusivity.
- ◆ Examine complaint reports to ascertain the extent to which data on customer contacts and problem areas is gathered and used to identify root causes, reduce complaints, address problems, and monitor customer needs and expectations.
- ◆ Analyze a sample of customer complaints to LIPA and the actions taken by LIPA to respond. Determine extent to which customer contact information is incorporated into a service quality program.
- ◆ Review customer attitude and customer satisfaction surveys.

- ◆ Review recent surveys of types of calls and in-person inquiries being received and how LIPA monitors these.
- ◆ Evaluate the number of customer offices, staffing levels, and customer density for each district.
- ◆ Evaluate how LIPA is staffed for in-person inquiries, and how workload volumes and productivity are controlled.

Customer Service, Complaints, & Inquiries

- ◆ Review adequacy of records available to support customer service requirements and examine new service request policies for compliance with LIPA policies.
- ◆ Review procedures detailing information provided to customers relative to their rights.
- ◆ Determine number of disputes by type and office location and whether there is a formal policy for handling disputes. Determine whether personnel are properly trained to handle disputes.
- ◆ Ascertain the steps, if any, taken by LIPA to minimize customer complaints, including measures such as:
 - Conducting comprehensive and meaningful customer surveys and reacting accordingly
 - Emphasizing collection versus cutoff
 - Reducing service delays
 - Carefully applying requests for deposits
 - Aggressively pursuing resolution of access problems where they persist

Customer Accounting & Billing

- ◆ Evaluate the customer accounting organization and staffing.
- ◆ Review the organization, functions, and activities performed in the offices and in other bill paying centers
- ◆ Evaluate the procedures for implementing new service.
- ◆ Assess billing error frequency and resolution procedures.
- ◆ Analyze the internal procedures for processing bills.
- ◆ Review the effectiveness and flexibility of customer accounting systems for modification as required.
- ◆ Assess billing formats and their adequacy in communicating customer usage and pricing.
- ◆ Flow chart the steps related to calculating and sending bills, and the process for new service additions.
- ◆ Evaluate billing policies and practices related to residential and business customers.
- ◆ Determine the effectiveness of the bill estimating process, when it is used, and its effect on the billing process.

- ◆ Assess the use of quality and productivity measures, such as billing errors, off-schedule billing, and cost-per-bill prepared.
- ◆ Review how billing errors (tape reading error, rate error, monitoring equipment error) are handled and how bill adjustments such as back billing and refunds are made.

Credit & Collections

- ◆ Review payment methods and practices, such as mail remittance, pay stations, and lock boxes.
- ◆ Review cost of remittance processing from each method, the number of locations for payment by type, and the number of bills remitted by each method.
- ◆ Evaluate the collection cycle and process, including the credit extension policy and criteria used in grading collection risks.
- ◆ Assess the effectiveness of programs designed to direct problem customers to appropriate company programs and government agencies.
- ◆ Examine credit extension and deferred payment provisions.
- ◆ Evaluate the problem-payment customer procedures, deposit policies, and how late payment charges are applied and when.
- ◆ Determine whether security deposit policies are being appropriately applied.
- ◆ Assess the use of collection agencies relative to the level and cost of recoveries.
- ◆ Evaluate how field employees are used in the follow-up process, including non-payment disconnects.
- ◆ Review policies on write-offs and LIPA credit and collections policies, procedures, and standards.
- ◆ Review bad debt history and write-off time for uncollected accounts.

Evaluative Criteria or Expectations

- ◆ The telephone system for customer inquiry should be well-configured and adequately staffed.
- ◆ Information from customer complaints should be collected and used to identify the underlying root causes of customer questions and problems.
- ◆ Incorporation of customer opinion surveys data generally results in improved service to customers.
- ◆ There is a formal appeals process that is adequately communicated to all customers with service problems, and clear-cut guidelines exist for handling disputes.
- ◆ Response time for resolution of disputes should be reasonable, and the number of disputes and complaints should be decreasing.



- ◆ The customer accounting organization and staffing levels are appropriate for the services provided.
- ◆ The customer accounting system efficiently provides accurate and timely bills which provide useful information and data to ratepayers.
- ◆ Policies and procedures relating to billing should be clearly spelled out and errors should be minimized.
- ◆ The billing policies and practices are appropriate to the environment in which LIPA operates.
- ◆ The rate of billing errors, off-schedule billing, and cost-per-bill are measured and used as performance criteria.
- ◆ The billing error rate compares favorably with other comparable electric utilities.
- ◆ Adequate methods are available for payment, including lock box, neighborhood offices, pay stations, and pay-by-phone, and the methods used are cost effective.
- ◆ The collection cycle and process, at a minimum, adheres to standards and guidelines and also provides adequate service to ratepayers.
- ◆ Special programs are available for payment-troubled customers.
- ◆ Formalized procedures for collection of bad debts are in place.
- ◆ The level of write-offs for uncollectibles is not excessive and compares favorably with similar utilities.

Potential Issues or Problems That Could Be Expected

- ◆ Issuance and use of estimated bills
- ◆ Call center response time (service level) not being achieved
- ◆ Customer survey trends in the wrong direction

Scope Area E1.5.C: Efficiency of the Authority's Operations-Transmission & Distribution Operations

Scope of Work

The consultant must be prepared to review the success of the operation of the T&D System at LIPA, as it is currently overseen by National Grid, in this area. Focus must remain strong on the oversight of the operations by LIPA, including operational reports, success against KPIs, and lessons learned that could impact the new OSA with PSEG Long Island LLC. A very broad definition of T&D could include, but is not limited to, the following areas: reliability, preventive maintenance, and repair/replace and reactive/corrective maintenance.

The following identifies specific scope objectives for individual sections of this work plan area.

E.1.5.C.1: Reliability

This area will focus on reliability, including root cause analyses of outages, aging analyses of the plant, and standard indices.

- ◆ Review the establishment and attainment of System Average Interruption Frequency Index (SAIFI) and Customer Average Interruption Duration Index (CAIDI) goals.
- ◆ Determine if work processes are efficiently designed, implemented, and measured.
- ◆ Assess whether work force management processes include work definitions, priorities, time durations standards, efficient scheduling, work order procedures, progress reporting, quality controls, performance measurements (productivity, utilization, lost/delay time trends, etc.).
- ◆ Assess the level and quality of any mobile workforce tools.

E.1.5.C.2: Preventive Maintenance

This area will review the Authority's established preventive maintenance schedules to ensure that there are minimal backlogs.

- ◆ Assess whether preventive maintenance is properly scheduled, performed, and noted.
- ◆ Review if trend analyses are maintained.
- ◆ Evaluate if managers have necessary and timely information.
- ◆ Determine if the organizational design effectively and efficiently support the mission.
- ◆ Assess if the records of facilities (including specifications, location, maintenance repair, and trouble history) are comprehensive, accurate, up-to-date, and easily accessible.

E.1.5.C.3: Repair/Replace and Reactive/Corrective Maintenance

This area will review the Authority's decision making process which it has in place to assist in making repair or replace decisions.

- ◆ Assess whether adequate cost/benefit analyses are performed to assist in the repair/replace decision-making.
- ◆ Review whether work processes are efficiently designed and implemented.
- ◆ Determine if a comprehensive disaster or emergency restoration plan is in place, periodically revised, and appropriately communicated with effective training.
- ◆ Review LIPA's oversight of costs associated with storm restoration, including the accounting for storm costs (e.g., salvaged materials).

Proposed Staffing

Mr. Dennis J. Schumaker will be the *Principal Consultant* for this work plan area and will be assisted by **Mr. Eugene Johnson** as a *Senior Consultant* in this area.

Work Steps

- ◆ Evaluate the organizational structure and staffing of all functions within transmission and distribution operations and review current workloads and backlogs within each of the areas.
- ◆ Review historical staffing levels by function and correlate with historic workloads, if possible.
- ◆ Develop organization charts for each function.
- ◆ Review historical system average interruption frequency index (SAIFI) and customer average interruption duration index (CAIDI) reliability metrics.
- ◆ Review processes used to develop and execute plans to improve reliability.
- ◆ Request and review disaster or emergency restoration plans and processes used for updating, training, and monitoring of effectiveness.
- ◆ Evaluate the decision support systems, including maintenance standards, used to identify construction and maintenance activities relative to transmission and distribution assets.
- ◆ Review the information systems that support transmission and distribution operations, including, but not limited to:
 - Transformer load management
 - Trouble reporting system
 - Workforce planning, scheduling, and control
 - Outage reporting
 - Materials management systems
 - AM/FM system

- Automated dispatching
- ◆ Assess the use of internal data (contained within the various company databases) in supporting operations and providing adequate and timely information for rational management decision-making regarding preventive and/or corrective maintenance and the repair or replacement of transmission and distribution assets.
- ◆ Visit service areas, interviewing appropriate management to determine assignment of crews and utilization of scheduling techniques.
- ◆ Evaluate assignment of crews, crew size, crew, equipment, and achievement of requested completion dates.

Evaluative Criteria or Expectations

- ◆ The overall organization of the various functions related to electric transmission and distribution should be efficient and effective with clearly defined roles and responsibilities, staffing levels that are workload driven, and adequate consolidation of activities.
- ◆ Processes should be in place that enables LIPA to continuously monitor SAIFI and CAIDI, determine root causes, prepare improvement action plans integrated with the annual planning and budgeting process, and measure improvements resulting from projects addressing the root causes.
- ◆ Processes should be used for annual review of the disaster or emergency plans, adjustments, and periodic training all employees that would be involved in emergency recovery.
- ◆ The work management tools used for managing work activities should include planning, scheduling, and resource techniques, and have a level of detail sufficient for adequate control, including:
 - Manpower planning
 - Logical work breakdown structures
 - Progress reporting
 - Productivity indicators
 - Reasonable administrative costs
- ◆ Current technology is being used and emerging technology is being assessed for incorporation as appropriate.

Potential Issues or Problems That Could Be Expected

- ◆ *Lack of adjustment of organizational and staffing levels:* Some utilities have not entirely adjusted their workforce levels in response to the economy, consolidation of job duties, and introduction of technology.



- ◆ *Lack of application of distribution automation:* Utilities tend to focus on vegetation management (generally the major cause of outages) and aging and deteriorated equipment when improving reliability. Automatic switching between circuits for restoration is a viable option in high circuit density areas.
- ◆ *Lack of alignment of processes and technology:* Some utilities tend to implement technology without optimizing the process. Technology applied to improve the efficiency of effective processes provides the optimum return on technology expenditures.
- ◆ *Lack of leveraging data in diverse systems hinders performance:* Numerous operational systems are used in electric utilities and the data tends to be in separate databases. Integration of the data from the diverse databases to produce information enhances the decision making process.

E2: THE MANNER IN WHICH THE AUTHORITY IS MEETING ITS DEBT SERVICE OBLIGATIONS

Scope of Work

- ◆ Application of industry standards to manage debt
- ◆ Receipt of necessary approvals for debt management
- ◆ Audit of debt management practices
- ◆ Effectiveness of risk management techniques
- ◆ Effectiveness of the rate making model relative to meeting the Authority's debt obligations
- ◆ Background events that led to the establishment of the Shoreham acquisition adjustment and subsequent changes to the adjustment
- ◆ Cash reserve policy

The following identifies specific scope objectives for individual sections of this work plan area.

E2.1: Application of industry standards to manage debt

- ◆ Review and evaluate the Authority's debt management plans, including its debt retirement plans.
- ◆ Assess the application of industry benchmarking data to evaluate its debt costs.
- ◆ Evaluate the selection process for underwriters.
- ◆ Review process and effectiveness of debt cost analyses.
- ◆ Review process for monitoring interest rates and other financial factors relative to the Authority's management of its debt costs.
- ◆ Review and evaluate refinancing analyses.

E2.2: Receipt of necessary approvals for debt management

- ◆ Review thoroughness of compliance documentation from each of the Authority's regulatory bodies that order debt compliance requirements.
- ◆ Review documentation from the Finance Committee's review of and recommendations for the Authority's debt issuance proposals.
- ◆ Review and evaluate the Authority's documentation and its actions in response to the Finance Committee's recommendations with respect to its debt issuance proposals.

E2.3: Audit of debt management practices

- ◆ Review and evaluate the Authority's policy for the internal audit of its debt management.

- ◆ Review and evaluate the Authority's documentation of debt management internal audits conducted by Baker Tilly.
- ◆ Evaluate the Authority's documentation of and follow-up actions in response to its internal audit organization reviews.
- ◆ Evaluate the effectiveness of the Authority's follow-up actions in response to meetings with credit rating agencies and to credit rating agencies' reports relative to its debt management practices.

E 2.4: Effectiveness of risk management techniques

- ◆ Evaluate the Authority's debt management policy, statement and strategy.
- ◆ Evaluate the Authority's process to monitor interest rates and other financial factors relative to its risk management techniques.
- ◆ Evaluate the Authority's policy concerning its interest rate swap policies and procedures.

E2.5: Effectiveness of the rate making model relative to meeting the Authority's debt obligations

- ◆ Review and evaluate the Authority's policy, analyses and plans that address its debt management strategies relative to meeting its debt obligations.
- ◆ Evaluate the effectiveness of the Authority's follow-up actions from the meetings with and reports from credit rating agencies with regard to LIPA meeting its debt obligations.
- ◆ Review the Authority's documentation from its meetings with and from audits/studies conducted by its regulatory bodies.
- ◆ Evaluate the Authority's use of assessments and recommendations from its regulatory bodies in its ratemaking model.
- ◆ Evaluate the Authority's documentation of capital projects and the respective funding for each project.

E2.6: Background events that led to the establishment of the Shoreham acquisition adjustment and subsequent changes to the adjustment

- ◆ Review the thoroughness of the Authority's documentation on the establishment of the Acquisition Adjustment and related debt.
- ◆ Evaluate the Authority's plans and management of its plans for the amortization of the Acquisition Adjustment and the related debt.
- ◆ Review and evaluate documentation about the Acquisition Adjustment and related debt as well as the Authority's follow-up actions that addressed those issues.
- ◆ Review and evaluate documentation between the Authority and the regulatory bodies to which it is accountable, as it amortizes the Acquisition Adjustment and retires related debt.

- ◆ Review and evaluate the Authority's actions in response to any recommendations made by the regulatory bodies to which it is accountable, as it amortizes the Acquisition Adjustment and related debt.

E2.7: Cash reserve policy

- ◆ Review and evaluate the Authority's cash reserve policy that serves as its baseline to revenue requirement.

Proposed Staffing

Ms. Patricia H. Schumaker will be the *Team Lead*. **Mr. Robert L. Rosenkoetter** will be the *Principal Consultant* for these work plan areas and will be assisted by **Ms. Martha J. King** as a *Senior Consultant* in this area.

Work Steps

- ◆ Review the Authority's policies, procedures, statements, and strategies regarding its debt obligations to include the acquisition, management, or retirement of debt.
- ◆ Review any available industry or peer company benchmark studies concerning debt levels and management for electric utilities.
- ◆ Assess the Authority's underwriting selection process in effect for debt offerings over the past five years.
- ◆ Review the details concerning the Authority's debt offerings over the past five years and compare and contrast performance of the underwriting firms utilized, including success of offering and cost to the Authority.
- ◆ Evaluate the Authority's overall cost of acquiring debt for the past five years.
- ◆ Determine the availability for refinancing existing debt instruments and the ease and cost of refinancing.
- ◆ Review the documentation requirements for each of the regulatory bodies involved in approving and monitoring debt acquired by the Authority and the Authority's compliance with these requirements.
- ◆ Evaluate the Finance Committee's review and approval process for the Authority's debt issues.
- ◆ Review and assess for completeness and appropriateness all documentation concerning the Finance Committee's review and instructions relative to the Authority's debt issues.
- ◆ Determine if the Authority's has policies and procedures regarding internal audits of the issuance and management of debt and assess the effectiveness and completeness of any policies and procedures uncovered.
- ◆ Review the internal audit process and evaluate for completeness and appropriateness.

- ◆ Review any internal audits conducted regarding the issuance or management of debt over the past five years.
- ◆ Assess the internal audit follow-up process and required documentation and the Authority's compliance with requirements concerning any internal audits conducted regarding debt management.
- ◆ Review any reports issued by credit rating agencies regarding the Authority's debt issuance over the past five years.
- ◆ Determine if there have been any follow-up actions required by credit rating agencies.
- ◆ Review any documentation supporting the Authority's compliance with required follow-up activities based on credit rating agency reports.
- ◆ Evaluate the effectiveness of any follow-up actions conducted by the Authority in response to credit agency requirements.
- ◆ Review the Authority's risk management policies, procedures, strategies, and plans, including interest rate swaps.
- ◆ Document and assess the process used by the Authority to manage its risk management function, including its monitoring and effective management of interest rates.
- ◆ Determine if the Authority used any assessments or recommendations from regulatory authority in developing its ratemaking model and assess the Authority's compliance with regulatory recommendations.
- ◆ Review and assess documentation concerning the Authority's capital projects for the past two years and the funding source for each project.
- ◆ Review details and circumstances, including supporting documentation, concerning the Authority's establishment of, and any subsequent revisions to, the Shoreham Acquisition Adjustment.
- ◆ Assess the adequacy and completeness of documentation supporting the Acquisition Adjustment and related debt.
- ◆ Review and evaluate any follow-up actions undertaken by the Authority to address issues with the Acquisition Adjustment and related debt.
- ◆ Evaluate the Authority's plans for, and management of the process of, amortizing the Acquisition Adjustment and related debt.
- ◆ Review and assess any documentation between the Authority and its regulatory authorities concerning the amortization of the Acquisition Adjustment and the retirement of related debt.
- ◆ Review any recommendations made to the Authority by the concerned regulatory bodies regarding the amortization of the Acquisition Adjustment and related debt and evaluate the Authority's actions in response to any recommendations offered.

- ◆ Review the Authority's cash reserve policy that serves as its baseline to its revenue requirements and assess the adequacy, completeness, and appropriateness of any policies related to cash reserves and revenue requirements.

Evaluative Criteria or Expectations

- ◆ The Authority's policies, procedures, statements, and strategies concerning the acquisition, management, and retirement of its debt are comprehensive, complete, and appropriate for electric utilities of comparable size and circumstances.
- ◆ The Authority compares favorably to industry standards and available peer group averages as regards debt levels and debt management practices.
- ◆ The Authority's underwriting selection process is straight forward, transparent, approved by appropriate management levels, and fair and competitive.
- ◆ The cost of debt acquisition is reasonable and comparable to industry standards.
- ◆ Refinancing possibilities are available, cost effective, and utilized when appropriate.
- ◆ The Authority has complied with all regulatory documentation standards regarding debt acquisition and management.
- ◆ Review and approval of debt issues by the Finance Committee is certain, complies with company policies and applicable industry standards, and is well documented.
- ◆ Internal audits concerning the issuance and management of debt are required to be performed on a regular basis.
- ◆ Internal audits performed are adequate to ensure compliance with the Authority's policies and regulatory requirements and good management practices.
- ◆ Reports issued by credit rating agencies indicate that the Authority's debt management practices and performance are acceptable.
- ◆ There is effective and certain follow-up to internal audit, credit agency, and regulatory directives, findings, and recommendations.
- ◆ The Authority's risk management function, including the management of interest rates, operates efficiently and is well managed.
- ◆ The Authority's decisions and actions concerning the Shoreham Acquisition Adjustment and the amortization of related debt appear to be prudent and cost effective and were carried out in an efficient manner.

Potential Issues or Problems That Could Be Expected

- ◆ Policies and procedures governing debt issuance and management are not well developed, documented, or adhered to.



- ◆ The debt issuance process is inefficient and not competitive, resulting in higher than necessary cost.
- ◆ Debt instruments do not allow the Authority sufficient flexibility to manage debt functions effectively.
- ◆ The level and cost of debt is higher than expected or normal for the size and type of organization.
- ◆ The debt function is not approved or managed by the proper level of authority within the organization.
- ◆ There are insufficient reviews or audits conducted to ensure proper adherence to company and regulatory requirements.
- ◆ There are insufficient follow-up to directives, findings, and recommendations for internal and/or external audit or regulatory authorities.
- ◆ There is insufficient documentation to determine proper conduct of the debt issuance and management function.
- ◆ The Authority's documentation concerning the establishment of the Acquisition Adjustment is insufficient to validate the action taken.
- ◆ The Authority's plans and management regarding the Acquisition Adjustment and amortization of related debt were improper or were not carried out in the most efficient and effective manner to benefit ratepayers.

E3: THE AUTHORITY'S FUEL AND PURCHASED POWER COST ADJUSTMENT CLAUSE AND RECOVERY OF COSTS ASSOCIATED WITH SUCH CLAUSE

Scope of Work

- ◆ Fuel and purchased power clause
 - LIPA's active and effective involvement in New York Independent System Operator (NYISO) issues and operation as well as other regional entities
 - LIPA's fuel and purchased power contract management, including PSA, Fuel Management and Bidding Services Agreement (FMBSA), and EMA
 - LIPA's fuel and purchased power cost adjustment clause Tariff Leaf 166
 - LIPA's fuel and purchased power cost recovery
- ◆ Supply procurement and load forecasting
 - LIPA's supply procurement
 - Load forecasting

The following identifies specific scope objectives for individual sections of this work plan area.

E3.1: LIPA's Active and Effective Involvement in New York Independent System Operator (NYISO) Issues and Operation as well as Other Regional Entities

This area focuses on LIPA's ability to impact issues which can affect the reliability and cost of electricity for its customers as a result of rules and/or operations of wholesale electricity market and/or reliability entities such as the NYISO as well as New York State Reliability Council (NYSRC); Northeast Power Coordinating Council (NPCC); and North American Electric Reliability Corporation's (NERC).

- ◆ Review LIPA's coverage at stakeholder forums (e.g., standing committees, working groups and task forces and ad hoc groups) of the above mentioned state or regional market/reliability entities in terms of number and expertise of both assigned personnel and management oversight particularly in areas and emerging issues that are expected to have a significant impact.
- ◆ Review LIPA's actions regarding advocating for and protecting customer interests and associated reliability and cost impacts in relevant stakeholder forums with respect to issues such as NYISO operations, NYISO billing, interpretations and applications of NYISO market rules (including the internal administrative compliance costs of participating in various markets); potential changes in market rules; interpretations and applications of NYSRC, NPCC and NERC reliability rules; potential changes in reliability rules, and results of planning studies conducted by the NYISO and others.

- ◆ Evaluate LIPA’s initiatives in developing and advocating changes in market and reliability rules in relevant stakeholder forums to help improve overall market efficiency and reliability.
- ◆ Review LIPA’s interest in improving the overall efficiency and effectiveness of state and regional market and reliability entities including but not limited to budgeting, and cost control, performance objectives and metrics, strategic planning and overall management.

E3.2: LIPA’s Fuel and Purchased Power Contract Management, including PSA, Fuel Management and Bidding Services Agreement (FMBSA), and EMA

This area focuses on LIPA’s ability to effectively manage its PSA for sale and delivery of electric capacity and energy by KeySpan Generation LLC (GENCO) (oil and gas-fired generating plants on Long Island formerly owned by Long Island Lighting Company (LILCO)) and its EMA (management of fuel supplies) with KeySpan subsidiary (the “Energy Manager”) for use by GENCO to produce electric energy for delivery to LIPA customers. This area will also focus on LIPA’s ability to effectively manage its FMBSA with National Grid Energy Trading Services, LLC, for generating units other than the GENCO.

- ◆ Evaluate LIPA’s auditing, enforcement and management of its PSA to effectively and efficiency balance reliability with low cost electricity for its customers.
- ◆ Evaluate LIPA’s auditing, enforcement and management of its FMBSA to effectively and efficiency balance reliability with low cost electricity for its customers.
- ◆ Evaluate LIPA’s auditing, enforcement and management of its EMA to effectively and efficiency balance reliability with low costs electricity for its customers.

E3.3: Supply Procurement

- ◆ Identify and evaluate supply portfolio principles, goals and objectives for mass market default customers.
- ◆ Identify and evaluate risk management strategies and practices.
- ◆ Identity and evaluate the method(s) used by LIPA to evaluate the effectiveness of its supply portfolio with respect to price volatility and cost.
- ◆ Review supply procurement strategies, policies, processes, and methods, including as it relates to fuel purchased for the on-island generation.
- ◆ Review LIPA’s financial and physical hedging practices by customer type (e.g., residential, small commercial and industry (C&I), large C&I, etc.).
- ◆ Examine LIPA’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.
- ◆ Review and assess the current and proposed use of on-island generation provided by National Grid's Generation Company.
- ◆ Evaluate LIPA's position and use of alternate energy sources (e.g., hydropower, wind, energy storage, etc.).

E3.4: LIPA's Fuel and Purchased Power Cost Adjustment Clause Tariff Leaf 166

- ◆ Review and evaluate the clarity, usefulness, and thoroughness of LIPA's tariff.
- ◆ Examine items listed under Tariff Leaf 166 for reasonableness and relationship to fuel and purchased power cost.
- ◆ Examine LIPA's implementation of the tariff for consistency with the requirements specified under its fuel and purchased power tariff.
- ◆ Review LIPA's Tariff Leaf 166 to identify changes necessary to better describe and illustrate actual fuel and purchased power cost.

E3.5: LIPA's Fuel and Purchased Power Cost Recovery

- ◆ Verify that the cost recovered through this clause is not recovered in other rates and charges.
- ◆ Verify that the actual cost that is recovered correctly represents what is allowed under Tariff Leaf 166.
- ◆ Verify that the cost recovered through the fuel and purchased power cost adjustment clause were approved items by the appropriate managers and Authority's Board of Trustees.
- ◆ Verify that sufficient historical financial records are kept for a reasonable time frame to assist with the verification of fuel and purchased power cost.
- ◆ Evaluate the reasonableness of the projections of future fuel cost incorporated in the Power Supply Charge.
- ◆ Evaluate and identify improvements to LIPA's fuel and purchased power cost reconciliation with customer bills.
- ◆ Evaluate for the effectiveness of LIPA's policies, procedures, and processes for determining the correct cost recovery amount.
- ◆ Review policies and procedures for approving changes to cost recovery.
- ◆ Review LIPA's policies and procedures available for verifying cost recovery under the adjustment clause.
- ◆ Examine LIPA's day-to-day practices for consistency and adherence with the requirements specified under its fuel and purchased power policies and procedures.

E3.6: Load Forecasting

- ◆ Review the models, assumptions and key drivers, and other inputs used to forecast local and system-wide load requirements.
- ◆ Assess the inputs, including demand side management (demand response, etc.), energy efficiency, and other initiatives that are factors in the forecasting process.
- ◆ Evaluate the organization and staffing of forecasting functions.
- ◆ Review the extent to which the planning for electric load, as well as region-specific factors, is integrated into the overall business processes and strategies.
- ◆ Examine the NYISO's role in the State's electric forecasting, as it affects LIPA's forecasting

Proposed Staffing

Mr. Dennis J. Schumaker will be the *Team Lead* for these work plan areas. **Mr. Dennis J. Schumaker and Ms. Patricia H. Schumaker** will be *Principal Consultants* for these work plan areas and will be assisted by **Mr. Eugene N. Johnson** as a *Senior Consultant* in this area.

Work Steps

- ◆ Fuel and purchased power clause
 - LIPA's active and effective involvement in New York Independent System Operator (NYISO) issues and operation as well as other regional entities
 - LIPA's fuel and purchased power contract management, including PSA, Fuel Management and Bidding Services Agreement (FMBSA), and EMA
 - LIPA's fuel and purchased power cost adjustment clause Tariff Leaf 166
 - LIPA's fuel and purchased power cost recovery
- ◆ Energy supply
 - LIPA's supply procurement
 - Load forecasting

Fuel and Purchased Power Clause

- ◆ Identify key organizations and personnel responsible for LIPA's interface with regional entities, such as the New York Independent System Operator (NYISO); New York State Reliability Council (NYSRC); Northeast Power Coordinating Council (NPCC); and North American Electric Reliability Corporation's (NERC).
- ◆ Determine, through interviews and data requests, the processes used to interface with the regional organizations and the metrics used to monitor effectiveness.

- ◆ Formulate conclusions about LIPA's effectiveness in participation with regional entities.
- ◆ Identify the LIPA organization(s) and staffing that is accountable for Fuel and Purchased Power Contract Management, including Fuel Management and Bidding Services Agreement (FMBSA) and EMA
- ◆ Identify and assess the processes and metrics used to manage fuel and purchased power contracts.
- ◆ Evaluate the administration of the LIPA's FMBSA and EMA.
- ◆ Determine that LIPA has procedures in place that are being followed to achieve control of costs associated with processing fuel receipts and consumption transactions; processing energy purchase and sale transactions; processing emission allowances, reconciliation adjustments, and system loss adjustment and that it is accurately calculating the fuel and purchased power (FPP) rate, including compliance with the following Tariff Leaf 166 components:
 - The total actual cost of fossil and nuclear fuel purchased on behalf of the Authority to produce electricity, including nuclear fuel disposal costs and the Authority's share of the Nine Mile Point 2 nuclear generating plant decontamination and decommissioning costs paid to the operator, plus
 - The total actual cost of all electric power purchased by or on behalf of the Authority from the New York Power Authority (NYPA), other utilities, and independent power producers, including qualifying facilities and customer-generators, plus
 - The total actual cost of all transmission wheeling and other charges (including charges on any off-island transmission facilities which deliver power to the Authority's system), plus
 - The total actual cost of payments by the Authority to Customers who shed load during times of high system demands at the request of the Authority, plus
 - The actual fuel costs and the value of foregone emissions credits that partially offset revenues credited from energy sold to other utilities, power marketers, or other brokers who are not agents for retail power supply customers of the Authority, plus
 - The cost incurred under any system power supply management or fuel management services agreements, plus
 - The charges for Capacity, Energy, Scheduling, System Control and Dispatch Service, and ancillary services paid by LIPA as a participant in any Independent System Operator (ISO) administered markets, plus
 - Any other net charges (net of revenues) associated with TCCs, ancillary services and short term capacity received by LIPA as a participant in any ISO administered markets, plus
 - Bill Credit Adjustment (BCA) payments to ESCOs and DRCs under the LI Choice Program, plus
 - Premiums and other costs associated with the Authority's fuel hedging program, including

any gains or losses realized, plus

- Costs incurred to comply with the requirements of the New York State Renewable Portfolio Standards program.
- ◆ Determine whether LIPA's FPP procedures are reasonable and being followed.
- ◆ Verify the arithmetic accuracy of the calculation and reporting of allowable cost components included in the FPP rate charged to LIPA customers.
- ◆ Verify the arithmetic accuracy of LIPA's calculation of the FPP rate.
- ◆ Review the procedures and control for assembly and reporting of information in the FPP tariff billing sheets.
- ◆ Verify the proper FPP rates were properly applied in customer billings.

Supply Procurement

- ◆ Identify key organizations and personnel responsible for departments answerable to managing the PSA and FMBSA.
- ◆ Evaluate LIPA's management of its PSA and FMBSA.

Load Forecasting

Load forecasting is the primary driver impacting all aspects of an electric utility's operations. The load forecast serves as an input into the financial planning process, capital program planning process, and other internal processes. Load forecasts generally fall into three categories: short-term forecasts, up to one week; medium forecasts from a week to a year; and long-term forecasts, longer than a year. The forecasts for different time horizons impact different planning, construction and operations functions within the utility. Each forecast regime must be structured to address concomitant transmission and distribution systems requirements.

- ◆ Short-term forecasting methods often include a "similar day" approach employing various regression models and time series. For short-term load forecasting time-of-day factors, weather data, and customer classes are employed. Statistical approaches employ mathematical models that represent load as a function of different factors such as time, weather, and customer class.
- ◆ Medium-term forecasts consider population changes, economic development, industrial construction, and technology development, taking into account historical load and weather data, the number of customers in different categories, appliances in the area and their characteristics including age, the economic and demographic data and their forecasts, appliance sales data, and other factors.
- ◆ Long-term forecasts require consideration of plausible futures, which is necessary to obtain a likelihood distribution for future energy load and associated supply cost under alternative

scenarios. A portfolio model can then be employed to consider each future and determine the energies and costs associated with that future; and then least-cost, risk constrained plans.

Specific work steps include:

- ◆ Identify key organizations and personnel responsible for load forecasting functions.
- ◆ Submit initial document request (below) to obtain an overview of LIPA load forecasting models, assumptions and key drivers, and other inputs used to forecast local and system-wide load requirements.
- ◆ Meet with load forecasting staff to gain in-depth understanding of organization's purpose, mission, planning, goals and objectives, and strategies.
- ◆ Submit detailed document requests and develop in-depth an understanding of load forecasting organization functions, processes, and practices. Revisit forecasting models, assumptions and key drivers, and other inputs in this context.
- ◆ Review and evaluate Load Forecasting organizational design and effectiveness in fulfilling requirements.
- ◆ Review and evaluate Load Forecasting organizations' staffing, responsibilities, and accountabilities.
- ◆ Assess results and performance of Load Forecasting organization predicated on the evaluative criteria, enumerated below.
 - Identify, select and assess a representative sample of load forecasting projects that are completed and/or in progress, for the purpose of identifying opportunities to improve performance.
 - Assess interface with corporate Strategic & Operational Planning, Long-term Systems Planning, and Supply Procurement organizations and ascertain adequacy of Load Forecasting organization's deliverables in fulfilling mission, planning, goals and objectives, and strategies from these vantage points.

Evaluative Criteria or Expectations

Fuel and Purchased Power Clause

- ◆ Active participation with the regional entities is occurring, with documented evidence that LIPA is actively pursuing regional issues in the interest of the best outcomes for its customers.
- ◆ The fuel and purchased power contract management group has sufficient authority to enforce terms of agreements.
- ◆ The appropriate mix of short-term and long-term fuel and purchase power agreements are in place to respond to the market in the best interest of its customers.

- ◆ Appropriate metrics to monitor the suppliers of the contracts exists.
- ◆ Periodic audits of contract management activities are being conducted with robust audit plans and favorable results.
- ◆ The FPP rate and cost recovery mechanisms are accurate based on appropriate procedures.

Supply Procurement

- ◆ The appropriate mix of short-term, medium-term, and long-term agreements is in place.
- ◆ The average cost of supply cost is in line with market rates.

Load Forecasting

- ◆ Comprehensive, integrated load forecasting for transmission and distribution facilities is performed across the New York service area.
- ◆ Local forecasting and system-wide load forecasting requirements are fully compatible.
- ◆ Short-term, medium-term and long term processes are consistent and timeframes are clearly delineated.
- ◆ Short-term forecasts are effectively infused into the operations planning process.
- ◆ Risk mitigation strategies being developed in conjunction with corporate Strategic Planning and Supply Procurement organizations within alternative forecasting scenarios.
- ◆ Impact of non-linear effects such as price elasticity, demand side management and conservation programs are incorporated in load forecasting scenarios.
- ◆ Timely load forecasts are incorporated in corporate strategic plans and Supply Procurement organization planning processes.
- ◆ Simulations that true-up or reconcile previous load forecasts and actual loads are performed to hone forecasting assumptions for future applications.

Potential Issues or Problems That Could Be Expected

Fuel and Purchased Power Clause

Some of the potential areas where Schumaker & Company has seen issues or problems at various utilities include the following:

- ◆ Passive, rather than active, participation in regional entities.
- ◆ Inability to take advantage of volatility of markets.
- ◆ Improper items are included in the FPP rate and recovery calculations.
- ◆ Customer bills do not reflect the proper rates.

Supply Procurement

Some of the potential areas where Schumaker & Company has seen issues or problems at various utilities include the following:

- ◆ Over reliance/under use on outside third parties for managing the energy supply portfolio.
- ◆ Ineffective use of application software for managing the supply procurement function.

Load Forecasting

Some of the potential areas where Schumaker & Company has seen issues or problems at various utilities include the following:

- ◆ No central group exists that is responsible for load forecasting.
- ◆ The existence of several different load forecasts developed by different groups within the organization is being performed.
- ◆ Unexplainable variations between forecast and actual experience are occurring.



E4: THE AUTHORITY'S ANNUAL BUDGETING PROCEDURES AND PROCESS

Scope of Work

- ◆ Capital and O&M budgeting
- ◆ Program and project planning and management

E4.1: Capital and O&M Budgeting

- ◆ Examine and assess the roles of the Board of Trustees, and executive and senior management in goal setting, preparation, and oversight of the capital and O&M budgets.
- ◆ Review the processes that govern the Board involvement 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.
- ◆ Evaluate the construction/capital priority setting process.
- ◆ Review the incremental O&M expenses associated with new construction projects that are factored into the budgeting process.
- ◆ Study the effects of revenues/rates and financing opportunities or constraints on budget levels and priorities.
- ◆ Review the relationships among planned/budgeted expenditures and actual expenditures.
- ◆ Review and assess the capital budgeting process, including project authorization, project appropriation, increase/decrease of authorization/appropriation, capital budget status reporting (at both the National Grid and LIPA levels), validation in advance of appropriation, funding controls, and other elements of the capital budgeting process.
- ◆ Review and assess the budgeting guidelines, practices and procedures, including “zero-based” and other alternative methods.
- ◆ Examine the methodology for prioritizing and determining which capital projects get approved, including an examination of modeling software for capital and O&M budgeting. This includes a review of what involvement LIPA has in this process.
- ◆ Evaluate the 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, and by whom.

- ◆ Evaluate the bottom-up and top-down processes for developing the budgets for capital/construction classifications and categories.

E4.2: Program and Project Planning and Management

- ◆ Study the conversion of capital and O&M plans and budgets into specific programs and projects.
- ◆ Evaluate the 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 to improve the cost control, efficiency/productivity and work quality, and the level to which such variances are reported to LIPA.

Proposed Staffing

Mr. Robert L. Rosenkoetter will be the *Team Lead*. Mr. Robert L. Rosenkoetter will be one of the *Principal Consultants* for this work plan area and will be assisted by **Martha J. King** as a *Senior Consultant* in this area. This team will work closely with Mr. Lee E. Burgess, who is the *Lead Consultant* of the *Corporate Mission, Objectives, Goals, and Planning* work plan area and will work closely with Mr. Rosenkoetter regarding executive management and Board input review as well as performance and results management. This team will also work closely with **Ms. Patricia Schumaker** who will be the other *Principal Consultant* in the *Program/Project Planning and Management* area.

Work Steps

Capital and O&M Budgeting

- ◆ Evaluate the importance and use of LIPA's strategic planning documents and multi-year forecasts in the annual budget process.
 - Review strategic planning documents and multi-year forecasts noting their link to the annual budget.
 - Review how or if the planning and forecast documents support the budget process.
 - Determine that the budgets as created support or do not contradict the strategic planning documents and multi-year forecasts.
- ◆ Determine the various roles of all organizations and positions involved in developing, approving, and monitoring the capital and O&M budgets for LIPA's New York operations.
 - Review the details of the Board of Trustees and executive and senior management's involvement in the capital and O&M budgets and the budget processes.



- Identify the level of budget detail the Board sees and what their responsibilities are with regard to the budgets.
- Examine the roles of and relationships between regional and centralized planning and budgeting functions.
- Determine the budget task locations for all budgeting functions.
- Assess the appropriateness of current roles and relationships.
- Determine the source and reasonableness of budget assumptions.
- Determine if appropriate organizational levels have access to, or are responsible for planning, development, approval, management, and revision of the capital and O&M budgets.
- ◆ Review budgeting policies, practices, procedures, and guidelines for completeness and clarity.
 - Review capital and O&M budget calendars of events.
 - Assess guidelines for completeness, ease of use, efficiency, and effectiveness.
 - Flow chart both the capital and O&M budget processes, as necessary.
 - Determine degree of compliance with budget procedures.
 - Walk through the budget guidelines with knowledgeable personnel to determine that actual practices followed the guidelines.
 - Determine adequacy of budget detail.
 - Compare and contrast budget and reporting categories with the chart of accounts.
 - Determine if any zero-based budgeting procedures or methodologies have been utilized.
 - Determine if any other activity-based budget process have been utilized.
 - Assess the appropriateness of using zero-based budgeting or some other activity-base budgeting concepts in developing the O&M budget.
- ◆ Determine whether a bottom-up or top-down process is used for developing the capital and O&M budgets.
 - Assess the process used from the standpoint of: budget development efficiency, cost control, and operational effectiveness.
 - Determine what is used for capital/construction classifications and categories.
- ◆ Review priority setting process for the capital budget.
 - Evaluate details available.
 - Determine adequacy and completeness of review.
 - Assess availability of, appropriateness of, and compliance with, standard methodologies to rank or set priorities.

- Select several projects to test assumptions used in setting priorities.
- ◆ Determine if incremental O&M expenses associated with new construction are factored into the capital and the O&M budget processes.
 - Assess the appropriateness of the expenses included.
 - Determine that all capital projects have been treated equitably.
- ◆ Assess the effects of revenues/rates and financing opportunities or constraints on budget levels and priorities.
 - Review budget instructions and assumptions used in developing the last five annual capital and O&M budgets.
 - Interview personnel responsible for managing the budget preparation process.
- ◆ Define and evaluate the capital budgeting process, including project authorization, project appropriation, increase/decrease of authorization/appropriation, capital budget status reporting, validation in advance of appropriation, funding control, etc.
 - Review how projects and funds are authorized and how authorizations and appropriations can be modified.
 - Assess completeness and appropriateness of authorization, fund appropriation and the change process.
 - Identify and assess how the status of capital projects are reported and validated in advance of appropriation of funds, and the extent of controls on capital funding.
- ◆ Identify the current methodology for prioritizing and determining which capital projects get approved
 - Review the details of the methodology.
 - Analyze any historical problems with using this methodology.
 - Assess the appropriateness of the methodology.
 - Determine if appropriate cost/benefit analysis is conducted for major programs and capital expenditures.
- ◆ Examine any modeling software used for capital and O&M budgeting.
 - Assess effectiveness and efficiency of using this software.
 - Evaluate software selection process.
- ◆ Determine how capital and O&M budget expenditures are managed and controlled.
 - Identify the methodologies used to control and manage total company, program and project capital and O&M costs in the near and long term.
 - Review the critical reports used in managing and controlling expenditures, such as monthly

- budget versus actual expenditure reports.
- Determine if the capital and O&M budget expenditures are reviewed on an annual basis for adequacy, how and by whom.
 - Determine what cost control systems and processes are used.
 - ◆ Determine if there are controls over revisions to the budgets.
 - Determine who is responsible for initiation of the revision request.
 - Evaluate the review and approval process.
 - Identify any parameters or standard ranges uses.
 - Determine degree of compliance by selecting several changes from the budgets to determine the adequacy of evaluation and approvals received.
 - Evaluate the ability to modify the original budget and to adapt to changed circumstances or corporate plans.
 - ◆ Compare planned/budgeting expenditures, rate case proposed expenditures, and actual expenditures.
 - Prepare schedule comparing budgeted, rate case proposed, and actual expenditures for the past five years.
 - Review budget variance reports (with explanations) for both the capital and O&M budgets. Evaluate variance reporting standards, policies, and procedures.
 - Evaluate quality and quantity of analysis conducted on budget variances. Assess reasonableness of variance explanations. Determine the ability of LIPA to provide ad-hoc or other non-recurring analyses and reports.
 - Identify significant variances.
 - Assess rationale provided for anomalies.
 - Determine if LIPA's budget management and control procedures are effective in enhancing operational control over costs.
 - ◆ Assess the degree of integration of the budget processes and systems with the accounting processes and systems, as well as with other financial processes and systems. Determine the linkage with long-term plans.
 - ◆ Determine how budget forecasts are incorporated into rate case revenue requirements.
 - Identify responsibilities
 - Assess effectiveness and efficiency
 - ◆ Assess the degree and effectiveness of automated systems support for the budget processes.
 - ◆ Review actual versus budget expenses for both the Capital and O&M Budgets for the past five years.

- ◆ Evaluate budget processes for effectiveness and efficiency.

Program and Project Planning and Management

- ◆ Identify the organizations and staffing on LIPA organization charts responsible for program and project planning and management.
- ◆ Review program and project methodologies in place for program and project planning and management and the metrics used to monitor costs and schedules.
- ◆ Review policies, processes, procedures, and practices for the conversion of capital and O&M plans and budgets into specific programs and projects.
 - Identify how capital and O&M plans are reflected in capital and O&M budgets and from these budgets into programs and projects.
 - Select several programs and projects and trace them back through either the capital or O&M budget into the planning phase, long-term plans, business plans, etc.
 - Evaluate the conversion process for effectiveness and efficiency.
- ◆ Review and evaluate the methodology for tracking costs, work units, and work quality for specific programs and projects; identify typical variances between budgets and actual expenditures and work units; and determine how variances are tracked and minimized.
 - Review policies, procedures, and guidelines for tracking actual costs and comparing them to budgets.
 - Identify types of variances and parameters for reporting variances.
 - Trace actual costs, work units, and work quality measurements through to budget comparisons and variance reporting.
 - Evaluate the form and format for the periodic reporting of variances between actual expenses, work units, and work quality and the budgets.
 - Assess the appropriateness of the type of organizations involved in the recording, reporting, management and monitoring and review of variances.
- ◆ Identify the typical variances between original budgeted and actual capital expenditures and work units.
- ◆ Determine how variances are tracked and minimized to improve the cost control, efficiency/productivity and work quality, and the level to which such variances are reported to LIPA.



Evaluative Criteria or Expectations

Capital and O&M Budgeting

- ◆ The budgeting process and resulting capital and O&M budgets support appropriately LIPA's strategic and long term goals.
- ◆ Organizations and positions responsible for planning, developing, managing, revising, and approving the capital and O&M budgets are appropriate for the tasks involved.
- ◆ Capital and O&M budget guidance (policies, procedures and standards) and training is adequate, complete and appropriate for the level of organization involved.
- ◆ Capital and O&M budget preparation process is simple, straightforward, and easy to use.
- ◆ The capital and O&M budgets are prepared with an appropriate level of detail in defining responsibility centers, activities, and cost categories.
- ◆ The capital budget process requires adequate review and economic evaluation and justification.
- ◆ There is an appropriate methodology to rank proposed capital budget projects.
- ◆ Past accuracy for both the capital and O&M budgets are reasonable.
- ◆ The capital and O&M budgets provide users with the appropriate level of detail and adequate technical features to enable sound control over financial operations
- ◆ The capital and O&M budgeting and control processes and systems compare actual amounts to budgeted amounts and produce reports that are timely, accurate, and conducive to management by exception.
- ◆ Both the capital and O&M budgets are utilized effectively as cost controls mechanisms.
- ◆ Variance reporting standards are well defined and complied with.
- ◆ The capital and O&M budgets are able to be revised efficiently whenever actual results to date warrant revisions.
- ◆ The capital and O&M budget processes are adequately linked to the financial planning and other accounting and operational systems.
- ◆ The capital and O&M budget systems are efficient and effective and used in a consistent manner throughout the New York gas operations organization.

Program and Project Planning and Management

- ◆ A documented process with a logical work breakdown structure (WBS) using generally accepted project management principles is in use.
- ◆ The methodologies used for tracking costs, work units, and work quality for specific programs and projects are efficient and effective in identifying variances between budgets and actual expenditures and work units; and determining how to alleviate variances wherever possible.

- ◆ Metrics are in place to monitor project costs and scheduled completions.
- ◆ A direct line of sight path from project planning to approved budgets to actual jobs within the work management system exists.

Potential Issues or Problems That Could Be Expected

Capital and O&M Budgeting

Some of the potential areas where Schumaker & Company has seen issues or problems at various utilities include the following:

- ◆ Budgets do not support the overall strategic vision of the Company.
- ◆ Budgets take too long to be developed and approved, impacting the start of the budget year.
- ◆ Budgets are too difficult to develop and change, impacting on the time and effort required, therefore budgets do not get revised as often as they should.
- ◆ Budgets, especially operating budgets, reflect what was spent in prior years and not necessarily what is needed. They may not reflect the amount of money needed for the tasks involved.
- ◆ Budget variances are not examined by proper management levels and may not be explained by knowledgeable personnel.
- ◆ Budget variances are not reported.
- ◆ Ranges for variance may be set too high or too low and may not require meaningful analysis.
- ◆ Capital budget projects may not be evaluated realistically. Savings are projected too high; expenditures are underestimated; additional operating cost may not be included.
- ◆ Capital budget projects may not be evaluated against each other using a meaningful methodology, leading to improper priorities being set.
- ◆ Lack of standardization in O&M and capital budget preparation.
- ◆ Authorizations are lacking, or at least, the documentation of proper authorizations is lacking.
- ◆ Capital projects being authorized based on incorrect criteria.

Program and Project Planning and Management

In the course of many audits, Schumaker & Company has identified a number of key issues related to program and project management. We will pay close attention to this in the course of our review of LIPA, as they are potentially significant issues for a company. Frequently we see:

- ◆ Little importance is placed by senior management on using program/project management principles.

- ◆ Policies, procedures, and practices for tracking, reporting, and managing programs/projects are informal; therefore, employees do not follow best practices espoused by leading organizations, such as *Project Management Institute* principles.
- ◆ Program and/or project work scope with associated benefits are not clearly defined.
- ◆ Inaccurate costs estimates are routinely occurring.
- ◆ The lack of a standardized program/project methodology exists across the organization; without such standardization, management is unable to compare program/project progress and results.
- ◆ No project management office (PMO) exists with responsibility for ensuring adherence to document project management processes.
- ◆ Few employees have the background to really understand how to manage programs and projects.
- ◆ Project tracking and monitoring practices are not best industry practices.

E5: THE AUTHORITY'S COMPLIANCE WITH DEBT COVENANTS

Scope of Work

Generally, when a utility issues debt, it must comply with State and Federal (Securities and Exchange Commission) security regulations. Therefore, it is important that the audit verify whether the Authority has met its due diligence by complying with all stipulations made by its regulatory bodies. Moreover, it is important that the Authority actively review its debt covenants in order to determine opportunities for increased efficiencies and cost savings relative to administrative costs and opportunities to reduce its risks and lower its cost of debt.

E5.1: Compliance with All Debt Covenants

- ◆ Review and evaluate the Authority's policy for managing its compliance with its debt covenants.
- ◆ Review and evaluate the Authority's processes for managing debt covenant defaults.
- ◆ Review and evaluate the effectiveness of the Board of Trustees' monitoring of and reporting process for the Authority's debt covenant compliance.

E5.2: Management of Debt Covenant Requirements

- ◆ Review and evaluate the Authority's review process of its debt covenant requirements.
- ◆ Review and evaluate the Authority's process (and outcomes) to modify debt covenant requirements, to increase its efficiencies, reduce its risks and reduce its cost of debt.

Proposed Staffing

Ms. Patricia H. Schumaker will be the *Team Lead*. **Mr. Robert L. Rosenkoetter** will be the *Principal Consultant* for this work plan area. He will be assisted by **Martha J. King** as a *Senior Consultant* in this area.

Work Steps

E5.1: Compliance with All Debt Covenants

- ◆ Review LIPA's policy and process for managing compliance with debt covenants and managing debt covenant defaults.
 - Analyze policy and procedures used by LIPA in relation to compliance with debt covenants, noting if the policy is current and appropriate.
 - Analyze policy and procedures used by LIPA for debt covenant defaults and determine that policy is current and appropriate.
 - Review supporting documentation indicating that LIPA complies with these policies.

- ◆ Obtain an understanding of LIPA's debt situation through review of Moody's and Standard & Poor's ratings of the company and its debt activities over the past five years.
- ◆ Review and summarize all debt instruments of LIPA, including bank loan agreements, indenture agreements, and other security documents, and review, where available, similar debt information for selected competitors and compare for financial covenants and terms.
- ◆ Review LIPA's past and existing capital structure, with a focus on debt, and any anticipated major changes in the future.
- ◆ Review the debt management for LIPA to identify any real or perceived encumbrance of utility assets and determine the extent of any negative effects.
- ◆ Obtain all debt covenants associated with the debt instruments summarized above.
 - Determine that listing of all debt is complete by comparing to the most recent 10-Q or 10-K filings.
 - Determine that all outstanding debt has debt covenants readily available for review.
 - Determine that analysis is performed on a regular and timely basis to determine that LIPA is within the bounds of the debt covenant agreements.
 - Determine frequency of the ongoing debt covenant analysis and level of personnel involved in the analysis and review.
- ◆ Determine that process is not overly burdensome, yet is all inclusive enough to highlight out of compliance debt covenants.

E5.2: Management of Debt Covenant Requirements

- ◆ Review policies, procedures, and processes in place to manage debt covenants, including:
 - Evaluate LIPA's review process of its debt covenant requirements.
 - Evaluate process for debt covenant reporting, including accuracy and timeliness.
 - Determine adherence to minimum and maximum requirements as described in the debt covenant agreements, noting that defaults are being reported as they occur.
 - Review debt covenant compliance and frequency of reporting, noting that appropriate levels of management are receiving the information.
- ◆ Review and evaluate LIPA's process (and outcomes) to modify debt covenant requirements, to increase its efficiencies, reduce its risks and reduce its cost of debt.

Evaluative Criteria or Expectations

- ◆ LIPA's policy and process for managing compliance with debt covenants and debt covenant defaults should result in timely analysis of debt covenant compliance and timely reporting of debt covenant defaults.

- ◆ LIPA's debt situation should not negatively impact the company.
- ◆ LIPA debt instrument documentation, including bank loan agreements, indenture agreements and other security documents should be readily available for review.
- ◆ Compliance with debt covenants should not be overly burdensome, but should be inclusive enough to highlight out of compliance debt covenants.
- ◆ LIPA should have processes in place to review and modify, if appropriate, debt covenant requirements, to increase its efficiencies, reduce its risks and reduce its cost of debt.

Potential Issues or Problems That Could Be Expected

- ◆ Debt covenants do not receive the proper attention or are not publicized sufficiently, and the proper management personnel are not made aware of important covenant issues, which could lead to debt covenants being violated.
- ◆ Situations or practices that could lead to a covenant default are not well known or visible to responsible management, and actions, or inactions, leading to a default are taken.
- ◆ The Board of Trustees is not sufficiently included in the monitoring and reporting process and adverse actions related to debt covenants are enacted.
- ◆ The Authority could agree to debt covenant requirements that are not in the best interest of LIPA and its ratepayers.
- ◆ The cost of debt and risk incurred through the assumption of debt are inflated beyond reasonable levels.



G. Cost and Benefit Analyses

As discussed previously, a detailed list of recommendations in the report will address immediate changes that management can institute to achieve cost savings, and the detailed list will be prioritized. The final report defines a suggested time table for the proposed implementation of each recommendation, and provides estimates of the costs and benefits of recommendations where such costs and benefits are quantifiable within the scope of the audit. In past audits of this nature, costs have tended to fall into one of three categories:

- ◆ Assigning existing company personnel to implement recommendations, resulting in little or no incremental costs
- ◆ Engaging outside expert resources to implement recommendations, resulting in incremental costs
- ◆ Procuring additional software and equipment, also resulting in incremental costs

Likewise, the benefits associated with recommendations usually fall into one of four categories:

- ◆ Reduction in actual costs of operations within a functional area
- ◆ Increase in a revenue source within a functional area
- ◆ Change in work flow processes to allow for the provision of services to LIPA customers on a more cost-effective basis
- ◆ Change in other processes resulting in best business practices being implemented

Schumaker & Company believes that it is extremely important to attempt to develop a cost/benefit analysis for any recommendations that can support such an analysis. Although it would be difficult to develop a cost/benefit analysis for every recommendation that is made during a management and operations review, there are usually some recommendations which lend themselves to such an analysis. Furthermore, in many cases involving the better managed utility, the utility may have already performed similar cost/benefit analysis for a similar recommendation or other process improvement for which they should be given credit. Therefore, it is our practice to work with the utility to develop cost/benefit analyses wherever possible. Costs and benefits will include both qualitative and quantitative figures obtained through data obtained during the course of the audit.

V. Project Team and Responsibilities

A. Proposed Project Team Staffing

The single most important element Schumaker & Company brings to an assignment is the breadth and depth of our project team's experience. The project team proposed for this assignment is composed of selected individuals, whose talents and expertise complement one another. Schumaker & Company's team are seasoned veterans with many years of consulting experience including a strong working knowledge of utility company operations, management audits, and current industry issues. Each individual has been carefully selected according to his or her experience, technical expertise, and education in the areas for which he or she is proposed. We will bring to this review an especially strong team, a team that possesses all of the requisite skills and has worked together successfully in the past.

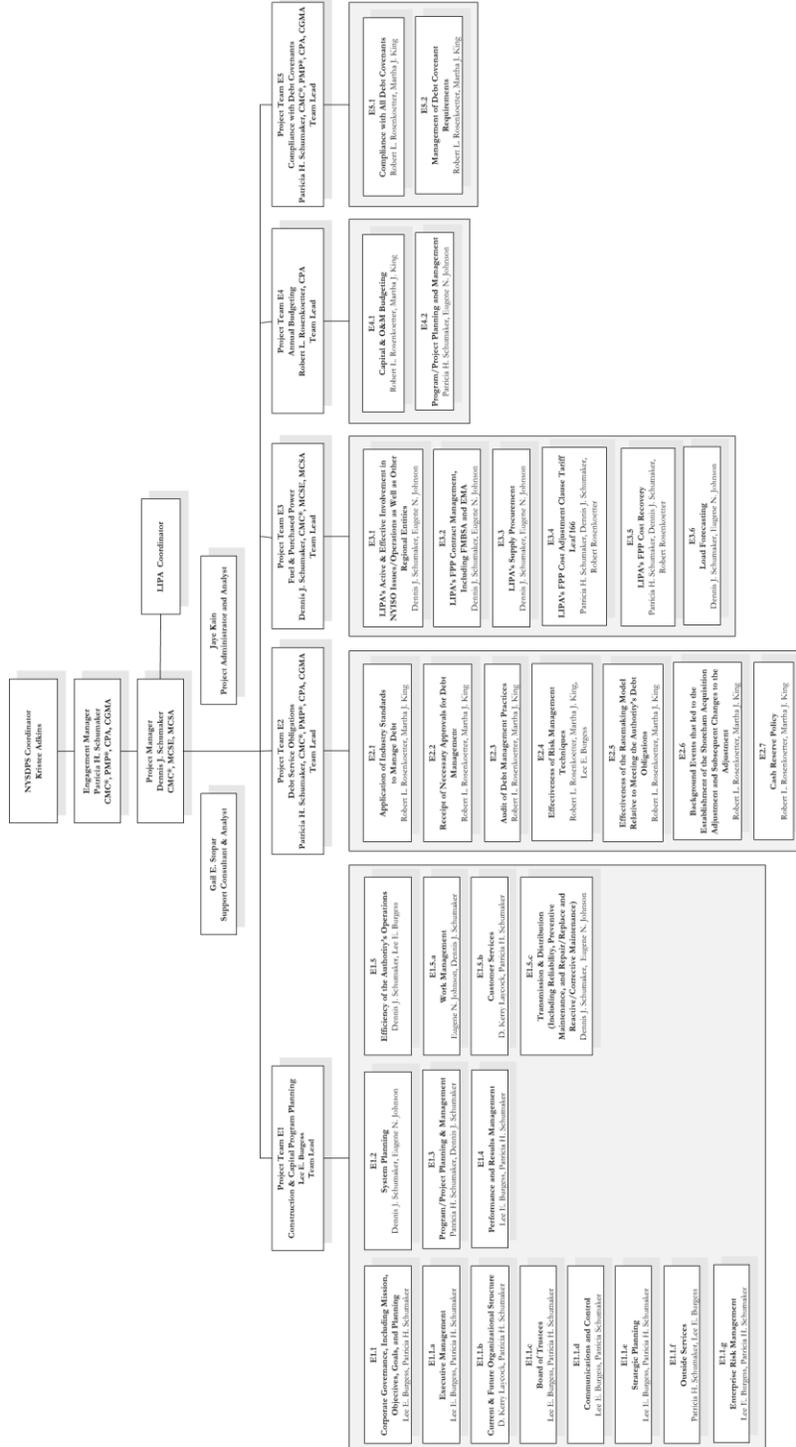
Our consultants are mature and experienced, with advanced degrees and practical business management experience. They consistently meet high standards of professional competence within their disciplines and have the team skills needed to work collaboratively with client organizations. Our consultants continue to earn and maintain various professional qualifications and certifications relevant to their managerial and technical expertise. The educational and professional designations of the nine proposed staff are summarized in *Exhibit V-1*.

Exhibit V-1
Consultant Team Experience

Name	Responsibility	Years Exp.	Education and Professional Designations
Patricia H. Schumaker	Engagement Manager & Principal Consultant	30+	BSBA (Accounting), MBA (Operations Research), CMC [®] , PMP [®] , CPA, CGMA
Dennis J. Schumaker	Project Manager & Principal Consultant	30+	BME (Mechanical Engineering), MS (Nuclear Engineering), MBA (Strategic & Corporate Planning), CMC [®] , MCSE, MCSA
Lee E. Burgess	Principal Consultant	26+	BS, MBA, CPIM
Eugene N. Johnson	Senior Technical Consultant	40+	BS (Electrical Engineering), MS (Industrial & Systems Engineering), PE
Martha J. King	Senior Consultant	20+	BBA (Business and Finance), CPA
D. Kerry Laycock	Principal Consultant	29+	BS (Business Administration and Management), MS (Organizational Development), CMC [®]
Robert L. Rosenkoetter	Principal Consultant	30+	BS (Business Administration), MBA (Finance), MPA (Professional Accountancy), CPA
Gail E. Stopar	Support Consultant and Analyst	24+	BS (Quality Management), MSA (Human Resource Management), Certificate in Accounting
Jaye M. Kain	Project Administrator & Analyst	20+	BS (Environmental Geoscience), BS (Geology), MS (Geology)

Our project team of nine individuals is organized as shown in *Exhibit V-2*.

Exhibit V-2 Project Team Organization



- ◆ Our proposed *Engagement Manager*, Patricia Schumaker, plays a quality assurance role for ensuring that the consultant team is provided with the appropriate resources for completing its activities on a timely basis. She will work closely with Commission staff to see that exactly the right technical expertise is available at the right times. She has extensive experience with utility management policies, procedures, and practices; performance management; and regulatory issues. Most recently, Ms. Schumaker was the *Engagement Manager* and *Lead Consultant* for Schumaker & Company's management audits of Equitable Gas Company, Philadelphia Gas Works, Pennsylvania-American Water Company, and PECO Energy for the Pennsylvania Public Utilities Commission; Jersey Central Power & Light Company for the New Jersey Board of Public Utilities; Duke Energy Indiana and Duke Energy Kentucky for their respective commissions, as well as other commission-order audits of Central Maine Power Company, Entergy, ALLTEL Pennsylvania, Commonwealth Telephone Company, Illinois Bell Telephone Company, US WEST, and others.
- ◆ Our proposed *Project Manager*, Dennis J. Schumaker, is the primary contact with the client regarding day-to-day operations of the project and performs a project management role, ensuring that the work is progressing within budget and on schedule. Mr. Schumaker previously served as the *Engagement Manager* or *Project Manager* on audits of Jersey Central Power and Light Company, Dayton Power & Light Company, State of Maine Public Advocate, Duke Energy Ohio, Public Service Company of New Mexico, Equitable Gas Company, Philadelphia Gas Works, Ameri-serv Group, Wayne County Airport Authority, Water Services Corporation of South Carolina, PECO Energy, Verizon New York, AEP Kentucky, SBC Ameritech Indiana, Public Service Electric & Gas Company, Rockland Electric Company, Conectiv, Elizabethtown Gas Company (NUI Corporation), New Jersey Natural Gas Company (New Jersey Resources Corporation), South Jersey Gas Company (South Jersey Industries Corporation), City of Sturgis, Middleborough Gas & Electric, Kingsport Power Company, Philadelphia Suburban Water Company, Michigan South Central Power Agency, Pennsylvania Power & Light Company, General Waterworks Corporation of Pine Bluff, City of Niles, New England Telephone Company, Kentucky-American Water Company, West Texas Utilities Company, Western Kentucky Gas Company, Union Light Heat & Power Company, Baltimore Gas & Electric Company, Columbia of Maryland Inc., Washington Gas Light Company, PSE&G's Hope Creek Nuclear Plant, Wisconsin Electric Power Company, Ohio Power Company, Columbus Southern Power Company, Peoples Natural Gas Company, Consumers Power Company, and others, such as a customer satisfaction survey project for the Illinois Commerce Commission.
- ◆ Each of the *Lead Consultants* is designated for each area, and he or she is responsible for executing the technical work plan in that area. The *Lead Consultant* is responsible for meeting task schedules and ensuring the completeness and coherence of work in his/her task areas, plus directing the efforts of other *Senior Consultants* supporting an area. Besides Dennis J. Schumaker and Patricia H. Schumaker, who will also be consultants on this project, other consultants include Lee E. Burgess, Eugene N. Johnson, Martha J. King, D. Kerry Laycock, and Robert Rosenkoetter. Their respective roles by task area are shown on *Exhibit V-2, Section C – Project Team Background* of this chapter, and *Chapter VII – Experience and Qualifications*.

- ◆ The *Support Consultant & Analyst*, Gail Stopar, will be working in several areas of the project, as identified, but will also be available for assisting any *Senior Consultant*, when needed, for analytical work.
- ◆ The *Project Administrator & Analyst*, Jaye M. Kain, will provide administrative and analytical support for the project, including assisting the *Project Manager* by administering PMIA for interviews and information requests.

The quality of the final product of a consulting project is a direct result of the project team selected to perform the assignment. Astute, experienced consultants working under an appropriate project management system will produce a high-quality product. The quality standards by which we abide are specifically designed to exceed those of our competitors – giving our clients one more good reason for selecting Schumaker & Company.

B. Project Management Responsibilities

Our *Engagement Manager*, Patricia H. Schumaker, CMC[®], PMP[®], CPA, CGMA, will lead our project team and is responsible for ensuring that the consultant team is provided with the appropriate resources for completing its activities on a timely basis. She also performs a quality assurance role, ensuring that the work is progressing within budget and on schedule.

Our *Project Manager*, Dennis J. Schumaker, CMC[®], will be the primary contact with the client regarding day-to-day operations of the project and will be based in our Ann Arbor (Michigan) headquarters office. The contact information for Mr. Schumaker is as follows:

Name:	Mr. Dennis J. Schumaker	Address:	3101 Walnut Ridge, Ann Arbor, MI 48103
Telephone:	(734) 998-5550	Email:	dschumaker@schuco.com
Fax:	(734) 998-5590		

C. Project Team Background

All proposed project staff have experience with utilities and management audits. *Exhibit V-3* shows the Schumaker & Company's project team experience in relationship to all areas of these audits.

**Exhibit V-3
Relevant Project Team Experience**

	Executive Mgt	Electric Ops & Supply	Finance	Customer Service	External Relations	Support Services	Affiliate Interest
Patricia H. Schumaker	•		•	•	•	•	•
Dennis J. Schumaker	•	•		•	•	•	•
Lee E. Burgess	•	•			•	•	•
Eugene N. Johnson	•	•		•		•	
Martha J. King	•		•	•		•	•
D. Kerry Laycock	•			•		•	
Robert L. Rosenkoetter	•		•	•		•	•
Gail E. Stopar	•		•	•		•	•

Based on the nature of the issues that need to be addressed or researched, other Schumaker & Company consultants would be made available for performing specific tasks as needed. We would discuss any need for additional Schumaker & Company resources with the NYSDPS Staff's *Project Manager* before engaging those resources on the project. Over 40 different professional staff are employed or affiliated with Schumaker & Company.

Schumaker & Company's recent five (5) major consulting engagements and the role of each proposed consultant in those studies is provided in *Exhibit V-4*. For those Schumaker & Company associates listed in *Exhibit V-4*, *Exhibit V-5* provides a listing of those projects where they have previously worked with Schumaker & Company and/or their associates on projects.

Exhibit V-4
Schumaker & Company's Recent Five Consulting Engagements

Team Member	Sample Project Names and Audit Types				
	Jersey Central Power & Light (Affiliate Transactions & Management Audit)	PECO Energy (Stratified Management-Operations Audit/Affiliate Audit)	Duke Energy Ohio (Management/Performance & Financial Review)	El Paso Electric/Public Service Company of New Mexico (Prudence Review & Audit of FPP & Business Operations)	Nova Scotia Power Incorporated (Coal Inventory Audit)
Patricia H. Schumaker Employee	EM & E1/LC: Finance, Accounting, Affiliate Transactions, Legal, IT, and Records Management	EM & E1/LC: Finance, Accounting, Affiliate Interests, Corporate Governance, Legal, IT, Facilities Mgt, Records Mgt, and Diversity/EEO	E1/LC: Fuel Clause Computations Financial Review; Policies, Procedures, & Practices; Midwest ISO Charges Analysis	E1/LC: Fuel Clause Computations Financial Review; Policies, Procedures, & Practices; Midwest ISO Charges Analysis	EM/LC: Financial Review
Dennis J. Schumaker Employee	PM & E1/LC: Governance, Management, Shared Services and Affiliate Relationships & Operations	PM & E1/LC: Executive Management, Electric/gas Supply/operations/ Emergency Response, GIS, Customer Service, Shareholder Proposals, and Merger Agreement Review	EM & E1/LC: Costs & Plant Operations, Power Interruptions, & Midwest ISO Charges Analysis	EM & E1/LC: Costs & Plant Operations, Power Interruptions, & Midwest ISO Charges Analysis	PM/LC: Operations Review
Lee E. Burgess Associate (5 Prior Projects)	E1/LC: Management and Corporate Governance, Risk Management, Organizational Structure, Strategic Planning, External Relations, & Support Services	E1/LC: Management and Corporate Governance, Risk Management, Organizational Structure, Strategic Planning, External Relations, Shareholders Proposals, Ethics and Internal Controls			
Eugene N. Johnson Associate (7 Prior Projects)	E2/C: Distribution and Operations Maintenance, & Extensions/Regulated Services Upgrades		E2/C: Coal Costs and Plant Operations, Midwest ISO Charges, & Power Interruptions	E2/C: Coal Costs and Plant Operations, & Power Interruptions	LC: Operations Review
Martha J. King Associate (3 Prior Projects) & Prior Employee (14 Prior Projects)					
D. Kerry Laycock Associate (11 Prior Projects)	E1/LC: Operational Structure, Human Resources, Diversity/EEO	E1/LC: Executive Management, Operational Structure, Human Resources, Diversity/EEO, Customer Service			
Robert L. Rosenkoetter Associate (14 Prior Projects)	E1/LC: Finance, Accounting, and Affiliate Transactions	E1/LC: Finance, Accounting, Affiliate Interests, Merger Agreement Compliance	E1/LC: Fuel Clause Computations Financials, Midwest ISO Charges Analysis, Sampling	E1/LC: Fuel Clause Computations Financials Review, Sampling	
Gail E. Stopar Employee	SC & Analyst: Customer Service & Prior Recommendations Review	SC & Analyst: Data & Statistics Research & Benchmarking Analysis; Support to Various Areas	SC, Analyst & Editor: Customer Service, Affiliate Interests, & Data & Statistics	SC: Support to Various Areas	
Jaye M. Kain Employee	PA		PA	PA	PA

EM = Engagement Manager, PM = Project Manager, PA = Project Administrator
E1-2 = Principal Consultant – Senior Consultant, Lead = Lead Consultant, SC = Support Consultant

**Exhibit V-5
Associates Team History**

Associate	Prior Projects
Lee E. Burgess	<ul style="list-style-type: none"> ◆ E1/LC: JCP&L ◆ E1/LC: Philadelphia Gas Works ◆ E1/LC: Equitable Gas Company ◆ E1/LC: Pennsylvania-American Water Company ◆ E1/LC: PECO Energy
Eugene N. Johnson	<ul style="list-style-type: none"> ◆ E1/LC: Tacoma Power ◆ E2/C: Nova Scotia Power Incorporated ◆ E2/LC: JCP&L ◆ E2/C: Dayton Power & Light Company ◆ E1/LC: Duke Energy Ohio ◆ E2/C: El Paso Electric Company ◆ E2/C: Public Service Company of New Mexico
Martha J. King	<ul style="list-style-type: none"> ◆ E2/C: Duke Energy Kentucky ◆ E2/C: Duke Energy Indiana ◆ E2/C: Michigan Public Service Commission ◆ E3/C: Central & Southwest Corporation ◆ E3/C: Michigan Treasury, Management & Budget, & Family Independence Agency ◆ E3/C: Elizabethtown Gas Company ◆ E3/C: New Jersey Resources Corporation ◆ E3/C: South Jersey Industries Corporation ◆ E3/C: Pennsylvania Gas & Water Company ◆ E3/C: Commonwealth Telephone Company ◆ E3/C: Pennsylvania Power & Light ◆ E3/C: Toledo Edison ◆ E3/C: Cleveland Electric Illuminating ◆ E3/C: US West ◆ E3/C: Illinois Bell Telephone ◆ E3/C: Consumers Energy
D. Kerry Laycock	<ul style="list-style-type: none"> ◆ E1/LC: JCP&L ◆ E1/LC: Equitable Gas Company ◆ E1/LC: Philadelphia Gas Works ◆ E1/LC: Pennsylvania-American Water Company ◆ E1/LC: PECO Energy ◆ E1/LC: City of Ann Arbor (Michigan) Housing Commission ◆ E1/LC: State of Michigan Office of Financial & Insurance Regulation ◆ E1/LC: State of Michigan Office of Financial & Insurance Services ◆ E1/LC: City of Detroit (Michigan) ◆ E1/LC: Town of Hilton Head Island (South Carolina) ◆ E1/LC: City of Dearborn (Michigan)
Robert L. Rosenkoetter	<ul style="list-style-type: none"> ◆ E1/LC: Duke Energy Kentucky ◆ E1/LC: Duke Energy Indiana ◆ E2/LC: JCP&L ◆ E2/LC: Dayton Power & Light ◆ E2/LC: Duke Energy Ohio ◆ E2/LC: Equitable Gas Company ◆ E2/LC: Tennessee-American Water Company ◆ E2/LC: El Paso Electric Company ◆ E2/LC: Public Service Company of New Mexico ◆ E2/LC: Philadelphia Gas Works ◆ E2/LC: PECO Energy ◆ E2/LC: Pennsylvania-American Water Company ◆ E2/LC: Verizon NY ◆ E2/LC: Verizon PA

EM = Engagement Manager, PM = Project Manager, PA = Project Administrator

E1-2 = Principal Consultant – Senior Consultant, Lead = Lead Consultant, SC = Support Consultant, C=Consultant



D. Proposed Staff Resume Briefs

The following resume briefs highlight the recent, relevant professional experience of our proposed consultants for this specific assignment. A background and experience summary is provided along with a listing of pertinent clients in which the respective consultant has gained experience relevant to his/her responsibilities for this assignment.

Please refer to *Appendix A – Consultant Resumes* for a detailed description of the experience and qualifications for all consultants who will be assigned to the project.

Ms. Patricia H. Schumaker, CMC[®], PMP[®], CPA, CGMA Engagement Manager & Principal Consultant

Ms. Patricia H. Schumaker will be the *Engagement Manager* for this assignment and will serve as:

- ◆ *Team Lead* for E2-Debt Service Obligations, and E5-Compliance with Debt Covenants
- ◆ *Principal or Senior Consultant* for E1.1.c-Board of Trustees, E1.1.d-Communications and Control, E1.1.3-Strategic Planning, E1.1.f-Outside Services, E1.1.g-Enterprise Risk Management, E1.3-Program/Project Planning and Management, E1.4-Performance & Results Management, E.1..5.b-Customer Services, E3.4-LIPA's FPP Cost Adjustment Clause Tariff, E3.5-LIPA's FPP Cost Recovery, and E4.2- Program/Project Planning and Management

Ms. Schumaker, CMC[®], PMP[®], CPA, CGMA has over 30 years of experience consulting for government agencies, utilities, telecommunications firms, service organizations, and manufacturing and distribution firms. She has considerable experience as both *Engagement Manager* and/or *Project Manager* on more than 100 projects, including management, operations, and technology reviews; business process reengineering and process outsourcing improvement projects, and technology implementation projects, for public and private sector organizations. Over 50 of these involved the review and implementation of project management or quality assurance techniques to a business or government entity's internal operations. She has also testified before regulatory commissions. Among the assignments where Ms. Schumaker has been either the *Engagement Manager* or *Project Manager* include the following utility assignments.

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|--|--|
| ◆ ALLTEL Pennsylvania | ◆ Jersey Central Power & Light P |
| ◆ Central Maine Power Company | ◆ National Fuel Gas Distribution Corporation |
| ◆ Commonwealth Telephone Company | ◆ PECO Energy Company |
| ◆ Dayton Power & Light | ◆ Pacific Gas & Electric Company |
| ◆ Duke Energy Kentucky | ◆ Pennsylvania-American Water Company |
| ◆ Duke Energy Indiana | ◆ Philadelphia Gas Works |
| ◆ Entergy/Arkansas Public Service Commission | ◆ Tennessee-American Water Company |
| ◆ Equitable Gas Company | ◆ Various Utilities in Michigan |

Ms. Schumaker has also acted as *Lead Consultant* for over 100 different management, operations, and technology assessments and performance reviews involving the areas of organization/ management, cost allocations, accounting/financial management, affiliate relationships/transactions, fuel and purchased power tariffs and cost recovery mechanisms, information technology/systems, human resources, quality improvement, and support services (purchasing, materials management, transportation, safety, legal, risk management, records management) on numerous management and operations assessments and performance reviews. Specifically, she has performed reviews of numerous electric utilities, including the following:



- ◆ AEP/Indiana Michigan Power (MI)
- ◆ Alpena Power Company (MI)
- ◆ Central Maine Power Company
- ◆ City of Niles (MI) Utilities Department
- ◆ City of Sturgis (MI) Electric Department
- ◆ Consumers Power Company (Consumers Energy)
- ◆ Dayton Power & Light
- ◆ Detroit Edison
- ◆ Duke Energy Indiana
- ◆ Duke Energy Kentucky
- ◆ Duke Energy Ohio
- ◆ El Paso Electric Company
- ◆ Entergy
- ◆ Kingsport Power Company (AEP)
- ◆ Jersey Central Power & Light
- ◆ Middleborough (MA) Gas & Electric Department
- ◆ Nova Scotia Power Incorporated
- ◆ PECO Energy Company
- ◆ Pennsylvania Power & Light Company
- ◆ Public Service Company of New Mexico
- ◆ Union Light Heat and Power Company
- ◆ Upper Peninsula Power Company (MI)
- ◆ West Texas Utilities Company (Central & Southwest Corp.)

She also has extensive experience in the gas, water, and telecommunications industries.

Previously, Ms. Schumaker held various positions within ADP Network Services, including *Director–Information Services*, *Director–National Accounts*, and *Director–Professional Services*, as well as other managerial, technical, and sales positions. She also performed numerous studies for utility, government, manufacturing and distribution, retail, and service clients while an auditor and consultant with Arthur Andersen and Lybrand Ross Bros. & Montgomery. She is one of the founders of Schumaker & Company, Inc. (1986).

Ms. Schumaker is a *Certified Public Accountant* (CPA) and a *Chartered Global Management Accountant* (CGMA) and holds a BSBA in Accounting from the Ohio State University. In addition, she earned an MBA in Operations Research from the University of Michigan, where she has also completed post-graduate coursework. She also holds other certifications such as *Certified Management Consultant* (CMC[®]) and *Project Management Professional* (PMP[®]).

E1-Corporate Governance

Corporate governance reviews performed by Patricia Schumaker begin with a clear definition of the authority, duties, and accountability of the board of directors and management. Special emphasis is placed on the accountability (duty to account) of the board of directors to the shareholders, and on its independence from management. Ms. Schumaker has participated in numerous management and operations audits involving the *Corporate, Mission, Objectives, Goals, and Planning* areas, including:

- ◆ ALLTEL Pennsylvania
- ◆ Cincinnati Gas & Electric/Union Light, Heat & Power
- ◆ City of Niles (MI) Utilities Department
- ◆ City of Sturgis Electric Department
- ◆ Commonwealth Telephone Company
- ◆ Equitable Gas Company/EQT
- ◆ Jersey Central Power & Light
- ◆ Kentucky-American Water Company/American Water
- ◆ Kingsport Power Company/AEP
- ◆ Pacific Gas & Electric Company
- ◆ PECO Energy/Exelon
- ◆ Pennsylvania Power & Light Company
- ◆ Pennsylvania-American Water Company/American Water
- ◆ Philadelphia Gas Works
- ◆ Philadelphia Suburban Water Company/PA Enterprises
- ◆ Southern California Gas Company
- ◆ United Water New Jersey
- ◆ West Texas Utilities Company/Central and Southwest Corp.
- ◆ Western Kentucky Gas Company/ATMOS

E3-Fuel & Purchased Power

Ms. Schumaker has over 30 years of experience in the electric and gas utility industry, which has included fuel procurement and fuel adjustment mechanisms in numerous jurisdictions. Ms. Schumaker understands not only the management and technical issues involving fuels management but also the procedural and administrative issues involved in performing such a review on behalf of a regulatory agency.

- ◆ Duke Energy Ohio
- ◆ El Paso Electric Company
- ◆ Nova Scotia Power Incorporated
- ◆ Public Service Company of New Mexico
- ◆ Pacific Gas & Electric Company
- ◆ Various AEP and FirstEnergy Ohio utilities

E2-Debt Service Obligations/E5-Compliance with Debt Covenants

Patricia Schumaker, CPA, has performed as *Lead Consultant* in this task area and analyzed, documented, and verified, through findings based on identifiable and measurable information and data financial management reviews. She has performed comprehensive reviews of the direct and indirect effects of borrowings and investments; short-term and long-term financial planning and analysis, debt management, budgeting, cash management, general accounting, property records, and tax management policies, procedures, and practices. And, thereby assessed the degree to which historical and projected activities have resulted in best practices. Her experience includes numerous studies for utility, government, manufacturing and distribution, retail, and service clients while an auditor and consultant with Arthur Andersen and Lybrand Ross Bros. & Montgomery.

- ◆ Ann Arbor Housing Commission
- ◆ ALLTEL Pennsylvania
- ◆ Cincinnati Gas & Electric Co./Union Light, Heat & Power
- ◆ City of Niles (MI) Utilities Department
- ◆ City of Sturgis Electric Department
- ◆ Commonwealth Telephone Company
- ◆ Dayton Power & Light Company
- ◆ Duke Energy Ohio
- ◆ Elizabethtown Gas Company/NUI Corporation
- ◆ El Paso Electric Company
- ◆ Equitable Gas Company/EQT
- ◆ Illinois Bell Telephone Company/Ameritech
- ◆ Jersey Central Power & Light
- ◆ Kentucky-American Water Co./American Water
- ◆ Kingsport Power Company/AEP
- ◆ New England Telephone Company/NYNEX
- ◆ New Jersey Natural Gas Company/New Jersey Resources
- ◆ Pacific Gas & Electric Company
- ◆ PECO Energy/Exelon
- ◆ Pennsylvania Power & Light Company
- ◆ Pennsylvania-American Water Company/American Water
- ◆ Philadelphia Gas Works
- ◆ Philadelphia Suburban Water Company/PA Enterprises
- ◆ Public Service Company of New Mexico
- ◆ Southern California Gas Company
- ◆ Tennessee-American Water Company
- ◆ Town of Hilton Head Island
- ◆ United Water New Jersey
- ◆ West Texas Utilities Company/Central and Southwest Corp.
- ◆ Western Kentucky Gas Company/ATMOS
- ◆ Various State of Michigan organizations



E1/4-Program/Project Planning and Management

Ms. Schumaker is a PMP® and has conducted management and operations reviews of capital program and project planning and management processes at the numerous gas, electric, water, and telecommunications utilities. Additionally she has acted as *Project Manager* or *Quality Assurance Manager* on numerous projects at the State of Michigan. As such she has been involved in performing and/or evaluating all of the scope items identified in the RFP, including 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 control at the program and project level; contractor management, project/program management, including accountability, goals, objectives, and performance measurement; and methodologies for tracking costs, work units and work quality for specific programs and project, and identifying variances and how they are tracked and minimized to improve the cost control, efficiency/productivity and work quality.

- ◆ ALLTEL Pennsylvania
- ◆ Cincinnati Gas & Electric/Union Light, Heat & Power
- ◆ City of Niles (MI) Utilities Department
- ◆ City of Sturgis Electric Department
- ◆ Commonwealth Telephone Company
- ◆ Equitable Gas Company/EQT
- ◆ Jersey Central Power & Light
- ◆ Kentucky-American Water Company./American Water
- ◆ Kingsport Power Company/AEP
- ◆ Pacific Gas & Electric Company
- ◆ PECO Energy/Exelon
- ◆ Pennsylvania Power & Light Company
- ◆ Pennsylvania-American Water Company/American Water
- ◆ Philadelphia Gas Works
- ◆ Philadelphia Suburban Water Company/PA Enterprises
- ◆ Southern California Gas Company
- ◆ United Water New Jersey
- ◆ West Texas Utilities Company/Central and Southwest Corp.
- ◆ Western Kentucky Gas Company/ATMOS
- ◆ Various State of Michigan organizations

Mr. Dennis J. Schumaker, CMC[®], MCSE, MCSA Project Manager & Principal Consultant

Mr. Dennis J. Schumaker will be the *Project Manager* for this assignment and will serve as:

- ◆ *Team Lead* for E3-Fuel & Purchased Power
- ◆ *Principal or Senior Consultant* for E1.2-System Planning, E1.3-Program/Project Planning & Management, E1.5-Efficiency of the Authority's Operations, E1.5a-Work Management, E1.5.c-Transmission and Distribution (including Reliability, Preventive Maintenance, and Repair/Replace and Reactive/Corrective Maintenance), E3.1- LIPA's Active & Effective Involvement in NYISO Issues/Operations as well as other Regional Entities, E3.2-LIPA's FPP Contract Management, Including FMBSA, EMA, E3.3-LIPA's Supply Procurement, E3.4-LIPA's FPP Cost Adjustment Clause Tariff, E3.5-LIPA's FPP Cost Recovery, and E3.6-Load Forecasting

Mr. Schumaker, CMC[®], MCSE, MCSA has over 30 years of business and industry experience with both private and public sector clients, including extensive experience in the electric, gas, telephone, and water utility industries. He has been the *Engagement Manager* and/or *Project Manager* on numerous assignments in the electric, gas, water, and telecommunications industry. Examples include:

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| ◆ Commonwealth Telephone Company | ◆ PECO Energy Company |
| ◆ Dayton Power & Light | ◆ Pennsylvania-American Water Company |
| ◆ Duke Energy Ohio | ◆ Philadelphia Gas Works |
| ◆ El Paso Electric Company | ◆ Public Service Company of New Mexico |
| ◆ Equitable Gas Company | ◆ Various AEP & FirstEnergy Ohio utilities |
| ◆ Jersey Central Power & Light | ◆ Verizon PA |
| ◆ National Fuel Gas Distribution Corporation | ◆ Verizon NY |
| ◆ Nova Scotia Power Incorporated | |

His consulting experience encompasses expertise in executive management and staffing, strategic and corporate planning, corporate organization and structure, project management, fuels management, business process re-engineering, materials management, engineering and construction and operations and maintenance (electric, telephone, gas, and water facilities), information technology, cost allocation and affiliated transactions, and quality assurance. He has also testified before five regulatory commissions. His specific experience in the electric, gas, water, and telecommunications industries includes assignments at over 75 different electric, water, or gas utilities.

He began his career as a design engineer with the Bechtel Corporation, after which he joined Theodore Barry & Associates (TB&A). He acquired more than eight years of consulting experience with TB&A before becoming one of the original founders of Schumaker & Company in 1986. Mr. Schumaker holds both a Bachelor's degree in Mechanical Engineering and a Master's degree in Nuclear Engineering from Ohio State University and an MBA from the University of Michigan. He is a *Certified Management Consultant* (CMC[®]), *Microsoft Certified Systems Engineer* (MCSE), and *Microsoft Certified Systems Administrator* (MCSA).



E1.2-System Planning

Over the last ten years, the level of sophistication regarding system planning activities within the industry has changed significantly. It is now possible to mine the data contained within a utility's business systems to develop sophisticated business decision making models to aid in the systems planning process. Risk based decision making is now possible and pressure has been applied at the federal level (via the Distribution Integrity Management Programs or DIMP) to speed up the adoption of such decision making processes. Cost/benefit is now being incorporated into a broader decision making criteria which would be more broadly characterized as a risk management process. Mr. Schumaker has reviewed infrastructure planning activities at over 12 different electric and gas distribution companies, including:

- ◆ Union Light Heat & Power (ULH&P)
- ◆ El Paso Electric Company
- ◆ Elizabethtown Gas Company/NUI Corporation
- ◆ Equitable Gas Company
- ◆ Jersey Central Power & Light
- ◆ New Jersey Natural Gas Company/NJ Resources Corporation
- ◆ PECO Energy Company
- ◆ Philadelphia Gas Works
- ◆ Public Service Company of New Mexico
- ◆ Public Service Electric & Gas Company
- ◆ South Jersey Gas Company/SJ Industries Corporation
- ◆ Western Kentucky Gas Company

E1.3-Program/Project Planning & Management

Mr. Schumaker has acted as *Engagement Manager, Project Manager, Lead Consultant, or Technical Consultant* on numerous management reviews at the request of both state and local government entities and directly for companies. These assignments involved the implementation of project management techniques into a business or government entity's internal operations. He is a member of the Project Management Institute (PMI) and presented the application of PMI methodologies titled *A Dose of One's Own Medicine*, which involved a large utility client providing services in various states at a national PMI meeting. He is also a member of the mid-western Microsoft Project Users Group.

With over 30 years of consulting experience, Mr. Schumaker has been the Project Manager for over 100 different assignments. Over 25 of these assignments involved the review and implementation of project management techniques to a business or government entity's internal operations. These projects included nuclear and fossil power plant projects, electric and gas transmission and distribution projects, water plant and distribution engineering and construction projects, telecommunications installation projects, and research and development projects.

Mr. Schumaker has implemented project management systems (mainframe and minicomputer-based systems) on assignments ranging from large multi-billion dollar nuclear and fossil generation projects to large ongoing software development projects. Project management software systems used include: Microsoft Project, APECS, Project 2, Artemis, Workbench, Primavera, @Risk for Project, and all Microsoft Office applications, including Word, Excel, PowerPoint, Access, Project, and Microsoft Back Office products, including all versions of Windows, Exchange Server, SharePoint, Internet Information Server, SQL Server, Internet Security and Acceleration Server (ISA), and Systems Management Server (SMS).

E1.5-Efficiency of the Authority’s Operations, including Work Management and Transmission & Distribution Operations

Mr. Schumaker’s evaluation of electric and gas operations includes a review of the organization and staffing of the operations group (electric and gas operations and maintenance and electric and gas construction) in relation to its ability to perform its chartered responsibilities in an effective and timely manner. This review investigates work and information flows, staffing levels over time, work order and work assignment procedures, and crew utilization and scheduling techniques.

Evaluating the current practices of a utility, he investigates the use of decision support systems and information technology in the management of the assets (both transmission and distribution) to determine (a) whether the processes used are consistent with currently accepted levels of technology for utility industry in general, (b) whether these processes are properly designed to support the organization in providing superior service to its customers, and (c) whether the utility attempts to tie expenditures to performance levels.

Additionally, he evaluates the engineering design and construction management functions as these are key areas to the efficient and effective operation and construction of the network that is the basis for the provision of reliable service to the customer. The engineering design and planning function must be capable of determining with accuracy the future requirements for service and making the proper provisions for same through the timely conceptualization and design of future facilities.

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| ◆ City of Niles (Michigan) Utilities Dept. | ◆ PECO Energy Company |
| ◆ Columbus Southern Power Company | ◆ Pennsylvania Power & Light Company |
| ◆ Dayton Power & Light Company | ◆ Pennsylvania Gas and Water Company |
| ◆ Duke Energy Ohio | ◆ Philadelphia Gas Works |
| ◆ El Paso Electric Company | ◆ Public Service Company of New Mexico |
| ◆ Equitable Gas Company | ◆ Tacoma Power T&D |
| ◆ Jersey Central Power & Light | ◆ Union Light, Heat and Power Company |
| ◆ Kingsport Power Company | ◆ West Texas Utilities Company |
| ◆ Middleborough Gas and Electric Dept. | ◆ Western Kentucky Gas Company |
| ◆ New Orleans Public Service | |

The efficiency and effectiveness of the management of the transmission and distribution assets within an electric utility directly translates into the system reliability experienced by the customer. The decision making regarding the management of these assets should incorporate the use of extensive quantitative data available from within the organizational information technology resources. The overall organization of the various functions related to electric and gas distribution should be efficient and effective with clearly defined roles and responsibilities, staffing levels that are workload driven, and adequate consolidation of activities. Mr. Schumaker’s assessment of electric and gas system reliability performance and related operations includes, but is NOT limited to, the following:

- ◆ A review of electric trends as measured by the Customer Average Interruption Duration Index, System Average Interruption Duration Index, System Average Interruption Frequency Index, and Momentary Average Interruption Frequency Index relative to Utility Commission benchmarks and standards, as applicable



- ◆ Testing the electric outage management system data collection process to assess the accuracy of the information being captured in the system
 - ◆ A review of service outage causal factor trends and remedial actions to ensure that preventable outages are maintained at reasonable levels
 - ◆ A review of electric and gas maintenance activities to determine their overall appropriateness and adherence to internal specifications as well as any applicable regulatory requirements
 - ◆ A review of gas infrastructure replacement efforts, in particular related to replacement of unprotected bare steel mains
 - ◆ A review of the Company's damage prevention programs including the electronic mapping of electric and gas system facilities, the trend of third-party line hits, and damage recovery efforts
- ◆ AEP/Kentucky
 - ◆ AEP/Indiana Michigan Power
 - ◆ Alpena Power
 - ◆ Arkansas Power & Light Company
 - ◆ Central Maine Power Company
 - ◆ Cleveland Electric Illuminating
 - ◆ City of Hillsdale
 - ◆ City of Niles Utilities Department
 - ◆ Columbus Southern Power Company
 - ◆ Conectiv
 - ◆ Consumers Energy
 - ◆ Detroit Edison
 - ◆ Duke Energy Ohio
 - ◆ Entergy
 - ◆ El Paso Electric Company
 - ◆ Florida Power and Light Company
 - ◆ General Public Utilities
 - ◆ Georgia Power Company
 - ◆ GP Energy
 - ◆ Illinois Power Company
 - ◆ Jacksonville Electric Authority
 - ◆ Jersey Central Power and Light
 - ◆ Kingsport Power Company
 - ◆ Long island lighting Company
 - ◆ Michigan South Central Power Agency
 - ◆ Nebraska Public Power district
 - ◆ New Orleans Public Service
 - ◆ Niagara Mohawk Power Company
 - ◆ Ohio Power Company
 - ◆ Pacific Gas & Electric Company
 - ◆ PECO Energy Company
 - ◆ Pennsylvania Power & Light Company
 - ◆ Public Service Electric & Gas Company
 - ◆ Rockland Electric Company
 - ◆ Sierra Pacific Power Company
 - ◆ Springfield City Utilities
 - ◆ Sunflower Electric Cooperative
 - ◆ Tennessee Valley Authority
 - ◆ Toledo Edison Company
 - ◆ Union Electric Company
 - ◆ Union Light Heat and Power Company
 - ◆ Upper Peninsula Power Company
 - ◆ United Power Cooperative
 - ◆ West Texas Utilities
 - ◆ Wisconsin Electric Power Company

E3-Fuel & Purchased Power/Supply Procurement/Load Forecasting

Fuel & Purchased Power

Mr. Schumaker has over 30 years of business and industry experience in the electric utility industry. This experience includes stints with Bechtel Corporation, which included the design of both nuclear and fossil power plant (including coal power plants), with Theodore Barry and Associates, which included fuel procurement studies for new power plant siting and approvals, and with Schumaker & Company, which has continued to involve activities relating to fuel management. His ongoing fuel procurement activities of power plants have included all the companies listed here.

Most recently, he has completed a fuel and purchased power cost adjustment clause audits of Public Service Company of New Mexico for the New Mexico Public Regulation Commission, Duke Energy Ohio for the Public Utilities Commission, and Dayton Power & Light. He also performed fuel management audits for state regulatory commissions including eight different assignments in the State of Ohio involving FirstEnergy companies Toledo Edison and Cleveland Electric Illuminating; AEP companies Columbus Southern and Ohio Power; Cincinnati Gas and Electric; and Dayton Power and Light. He understands the management and technical issues involving fuels management but also the procedural and administrative issues involved in performing such a review.

- ◆ Arkansas Power and Light facilities
- ◆ Central Maine Power facilities
- ◆ Consumers Power and Detroit Edison (DTE) facilities (MI)
- ◆ Dayton Power & Light Company
- ◆ Duke Energy Ohio
- ◆ El Paso Electric Company
- ◆ Georgia Power facilities
- ◆ Illinois Power facilities
- ◆ Jersey Central Power & Light
- ◆ Nebraska Public Power District – Gerald Gentleman Plant
- ◆ New Orleans Public Services oil-fired facilities
- ◆ Nova Scotia Power Incorporated
- ◆ Pennsylvania Power and Light facilities
- ◆ Public Service Company of New Mexico
- ◆ Sierra Pacific facilities
- ◆ Springfield City (MO) Utilities with coal sources from Pittsburg (KS)
- ◆ TVA facilities (TN)
- ◆ Union Light Heat and Power Company (KY)
- ◆ West Texas Utilities facilities and Central Power and Light facilities

Supply Procurement/Load Forecasting

Mr. Schumaker has performed various assessments of energy procurement (electric and gas) and energy trading and contracting at numerous private and public utilities and agencies. These reviews have included assessment of various electric power supply contracts (purchased power), fuel procurement policies and practices, and energy trading activities. These reviews also included an assessment of generation dispatching and transmission dispatch (tagging) operations. These reviews also included real time, day ahead, and longer term (future) contracting including physical and financial hedging practices. He has been involved in the energy trading activities of numerous different electric companies in both a completely regulated environment and in a deregulated environment. He understands the theories behind economic dispatch and energy trading and has been involved in performing assessment of various aspects of these activities. As an engineer by training, he not only understands the business aspects of energy trading but also the technical aspects as it relates to the various business models within the industry.

- ◆ City of Sturgis
- ◆ Dayton Power & Light Company
- ◆ Duke Energy Ohio
- ◆ El Paso Electric Company
- ◆ ISO New England
- ◆ Jersey Central Power & Light
- ◆ Michigan South Central Power Agency
- ◆ Midwest Independent System Operations
- ◆ New York Independent System Operator
- ◆ Pennsylvania Power & Light Company
- ◆ PJM
- ◆ Public Service Company of New Mexico
- ◆ Sunflower Electric Cooperative
- ◆ American Electric Power (Ohio Power Company and Columbus Southern Power)
- ◆ FirstEnergy (Toledo Edison, Ohio Edison, Cleveland Electric Illuminating)
- ◆ Union Light, Heat and Power Company (Duke Energy Ohio)
- ◆ West Texas Utilities Company (now AEP)
- ◆ Various utility energy trading and dispatch operations



Mr. Lee E. Burgess Principal Consultant

Mr. Lee Burgess, a Schumaker & Company associate, has more than 26 years of consulting experience to the utilities and regulatory industry. Mr. Burgess has a BS from The United States Naval Academy and an MBA from The University of Michigan. His professional career includes five years at sea as a naval officer and 25 years as a management consultant almost exclusively to the utility industries. Most of these assignments have been as a lead consultant, project manager, and/or engagement director. Mr. Burgess has performed numerous evaluations of utility organizational effectiveness as well as strategic planning, business planning, and the measurement of corporate performance. He will serve as:

- ◆ *Team Lead* for E1-Construction and Capital Program Planning and *Principal Consultant* for E1 various areas, including Corporate Governance and Performance & Results Management areas
- ◆ *Principal Consultant* for E2.4-Effectiveness of Risk Management Techniques

Mr. Burgess has experience with most aspects of utility operations including customer service, power plant engineering/construction/operations/maintenance, transmission and distribution, external relations, support services, materials management, and all aspects of executive management and corporate governance. A majority of his assignments have been performing management audits and prudence investigations of utility companies for state public service commissions. In New York, he has been involved in management audits of Niagara Mohawk, Rochester Electric and Gas, Brooklyn Union Gas, New York State Electric & Gas, and Long Island Lighting (all NYSDPS projects). He also testified as an expert witness for the NYSDPS in the prudence investigation of the construction of the Shoreham Nuclear Power Plant. More recently, Mr. Burgess has examined executive management and corporate governance of PECO Energy (Exelon), Pennsylvania-American Water Company (American Water Works Company), Equitable Gas Company, Philadelphia Gas Works, Jersey Central Power & Light Company, and many more. He is also a *Certified Practitioner of Inventory Management (CPIM)*.

E1-Construction and Capital Program Planning

Mr. Burgess has conducted reviews and implementation projects on all aspects of utility engineering and construction, including nuclear and fossil power plant construction, power plant modification and outage capitol work, and transmission and distribution systems. Utilities that Mr. Burgess has consulted with in the area of engineering and construction include those listed in the left-hand column.

- | | |
|------------------------------------|--|
| ◆ Alaska Energy Authority | ◆ Illinois Power Company |
| ◆ Arkansas Power & Light Company | ◆ Kentucky Utilities Company |
| ◆ Atlantic Electric Company | ◆ Louisville Gas & Electric Company |
| ◆ Carolina Power & Light Company | ◆ Rochester Gas & Electric Corporation |
| ◆ Commonwealth Edison Company | ◆ Tennessee Valley Authority |
| ◆ Consumers Power Company | ◆ Texas Utilities |
| ◆ Gulf States Utilities | ◆ Tucson Electric Power Company |
| ◆ Houston Lighting & Power Company | ◆ Wisconsin Electric Power Company |

Organization Effectiveness, Strategic/Business Planning, and Corporate Performance

Mr. Burgess has performed numerous evaluations of utility organizational effectiveness as well as strategic planning, business planning, and the measurement of corporate performance. There are many ways to measure the effectiveness of an organization, including different criteria from productivity, profits, growth, turnover, stability and cohesion. Different theoretical perspectives can account for the diversity in usage of effectiveness measurements. Some perspectives:

- ◆ Emphasize goal attainment and focus on output variables such as quality, productivity, and efficiency.
- ◆ Focus on the support goals of the organization such as participant satisfaction, morale, interpersonal skills, etc.
- ◆ Focus on the exchanges with the environment – this includes information processing, profitability, flexibility, adaptability

Mr. Burgess has performed these assignments and, in addition, for KTL, Inc. he developed and wrote the first strategic plan for the non-regulated companies of Kansas City Power and Light Company, which was conducted a seminar for senior management on strategic planning.

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|--|---|
| ◆ Atlantic Electric Company | ◆ KTL, Inc |
| ◆ The Brooklyn Union Gas Company | ◆ Long Island Lighting Company |
| ◆ Commonwealth Edison Company | ◆ Los Angeles Department of Water & Power |
| ◆ Commonwealth Utilities Corporation | ◆ Niagara Mohawk Power Corporation |
| ◆ Connecticut Light and Power Company | ◆ Philadelphia Electric Company |
| ◆ Connecticut National Gas Corporation | ◆ Philadelphia Gas Works |
| ◆ Equitable Gas Company | ◆ Pennsylvania-American Water Company |
| ◆ Illinois Bell Telephone Company | ◆ PECO Energy Company |
| ◆ Jersey Central Power & Light | ◆ The Peoples Gas & Light Company/North Shore Gas Company |

Corporate Governance

Mr. Burgess has performed complete reviews of several utility's governance policies, practices and procedures, and adherence to the Sarbanes-Oxley Act of 2002. These assessments determined, as applied to any unique circumstances, whether the utilities were implementing good corporate governance practices. Corporate missions, objectives, goals and planning issues included the following subject areas:

- ◆ The Board of Directors' (Board) organization, board committees' and their duties, frequency of meetings, and director salary and fee structure
- ◆ The independence, backgrounds, and areas of expertise of the Board Audit Committee members, their interactions with internal/external audit functions, and their relationship to that of its parent company's Board and other affiliated companies
- ◆ The ethics and conflict of interest policies and enforcement, internal controls, reports and risk assessment methodology, and any planned changes that may impact corporate governance



- ◆ Any policies related to the amount and type of non-audit services provided by the external audit firm and other audit firms, including the methodology used to approve this type of work.
- ◆ Implementation of enterprise risk management policies and practices.
- ◆ Commonwealth Edison Company
- ◆ Equitable Gas Company
- ◆ Jersey Central Power & Light Company/FirstEnergy
- ◆ PECO Energy/Exelon Corporation
- ◆ Pennsylvania-American Water Company/American Water
- ◆ Philadelphia Gas Works
- ◆ The Peoples Gas & Light & Coke Company

Performance and Results Management

Mr. Burgess has been responsible for management and operations reviews of performance measurement and results at the following utilities in just the last eight years.

- ◆ Commonwealth Edison Company
- ◆ Equitable Gas Company
- ◆ Jersey Central Power & Light Company/FirstEnergy
- ◆ PECO Energy/Exelon Corporation
- ◆ Pennsylvania-American Water Company/American Water Works Company
- ◆ Philadelphia Gas Works
- ◆ The Peoples Gas & Light & Coke Company

E2.4-Effectiveness of Risk Management Techniques

See *Corporate Governance* area above.

Mr. Eugene N. Johnson, PE Senior Technical Consultant

Mr. Eugene Johnson, PE, a Schumaker & Company associate, brings 40 plus years of utility experience with knowledge of distribution asset management; work management; operations improvement; geographical information system (GIS); design; maintenance and operations; budgeting; reliability improvement; restoration; and decision support information systems. He is a professional electrical engineer who brings a career's worth of asset management experience to this team. For this assignment, Mr. Johnson will serve as:

- ◆ *Principal Consultant* for E1.5.a-Work Management
- ◆ *Senior Technical Consultant* for E1.2-System Planning, E1.5.c-Transmission and Distribution (including Reliability, Preventive Maintenance, and Repair/Replace and Reactive/Corrective Maintenance), E3.1- LIPA's Active & Effective Involvement in NYISO Issues/Operations as well as other Regional Entities, E3.2-LIPA's FPP Contract Management, Including FMBSA and EMA, E3.3-LIPA's Supply Procurement, E3.6-Load Forecasting, and E4.2-Program/Project Planning and Management

He has interfaced with customers to design electric facilities to meet their energy requirements, prepared studies and plans for future expansion of the electric distribution network and managed a staff of 30 engineers, technicians, and supporting administrative employees. Mr. Johnson led the implementation of a daily work planning and scheduling process for field forces across a seven state area. He managed a 100 employee organization across 11 states that posted as-built distribution assets to a GIS system that documented the location of five million customers served by five million poles and 200,000 miles of conductor and interfaced with circuit analysis, outage management, customer information and work management. Mr. Johnson has also served as a field coordinator in the restoration of distribution facilities after a major ice storm and participated in numerous teams to improve distribution performance including optimal crew sizing.

Mr. Johnson holds a Masters in Industrial and Systems Engineering, and a BS in Electrical Engineering from Ohio University. He has also completed numerous human resource and management programs, conferences, leadership training, supervisory training, and process improvements methodologies training and seminars.

E1.2-System Planning

Mr. Johnson's management audit work has focused on management and operations assessments and performance reviews; system planning processes, business restructuring, business process re-engineering, and process analysis teams; affiliated transactions and cost allocations; customer satisfaction and needs assessments; performance measurement development; and information systems and technology. He has managed million dollar corporate budgets for projects to convert digital and paper maps and asset records, prepared business plans, secured financing, managed construction, implemented activity based budgeting

and reporting processes, implemented a daily work planning and scheduling process, and worked directly with senior management to design and develop management performance indicators. For more than 30 years Mr. Johnson has helped companies achieve lasting performance improvements by aligning processes, organization, and managerial accounting and control systems with business strategy. Some of his most recent clients include:

- ◆ American Electric Power
- ◆ City of Tacoma, Department of Public Utilities, Light Division
- ◆ Dayton Power & Light Company
- ◆ Duke Energy Ohio
- ◆ El Paso Electric Company
- ◆ Jersey Central Power & Light
- ◆ Lansing Board of Water & Light
- ◆ Nova Scotia Power Incorporated
- ◆ Public Service Company of New Mexico
- ◆ Various AEP and FirstEnergy utilities

E1.5.a-Work Management/E1.5.c-Transmission and Distribution (including Reliability, Preventive Maintenance, and Repair/Replace and Reactive/Corrective Maintenance)/E4.2 Program/Project Planning and Management

Mr. Johnson has:

- ◆ Managed an 100 employee organization with three managers and five supervisors across 11 states responsible for maintaining and providing up-to-date data to OMS that linked five million customers served through 200,000 miles of primary conductor to 6,000+ substation breakers.
- ◆ Met a major OMS implementation schedule by managing on-time and within budget a five year-\$20 million project to convert digital and paper maps and asset records of four operating companies to the enterprise GIS platform feeding outage management.
- ◆ Used GIS statistical modeling to identify relevant variables that would significantly affect the rate of growth and rule out those that would not, including staffing and implementation issues.

Mr. Johnson has been instrumental in providing initial in-vehicle access to maps and GPS locating devices enabling field personnel to navigate to locations outside their normal service area. He also reviews joint use and cost sharing agreements and construction standards for conformance with generally accepted standards. He reviews the “dig-in” process and evaluates cost sharing agreements for repairs. Capital investments associated with underground assets are reviewed for justification including the project’s contribution to improving reliability, variance from estimates, and variance from planned in-service dates. Mr. Johnson also evaluates underground equipment inspection and associated corrective maintenance programs and outage history associated with underground equipment including corrective actions that may include cable replacement. In addition, he evaluates the work management process, including origination of work requests, estimating procedures, weekly planning and daily scheduling processes, reporting process for work completed, and metrics for monitoring performance.

- ◆ American Electric Power
- ◆ City of Tacoma, Department of Public Utilities, Light Division
- ◆ Dayton Power & Light Company
- ◆ Duke Energy Ohio
- ◆ El Paso Electric Company
- ◆ Jersey Central Power & Light
- ◆ Lansing Board of Water & Light
- ◆ Nova Scotia Power Incorporated
- ◆ Public Service Company of New Mexico
- ◆ Various AEP and FirstEnergy utilities

E3 Fuel & Purchased Power/E3.3-LIPA's Supply Procurement/E3.6-Load Forecasting

Mr. Johnson has provided professional auditing and prudence review services of utility fuel and purchased power costs, fuel clause filings, and related documentation for stated specific time periods. His experience has found that clauses allowing the utility to adjust the amounts charged for electric and gas service as the costs of gas purchases, fuel for generation or purchased power change, and other factors may contribute to changes in purchased power expenses and sales for resale. These may include:

- ◆ Resale revenues increasing due to higher volumes of excess power available for resale partially offset by lower average market prices
 - ◆ Purchased power expenses decreasing, primarily due to a reduction in purchases from independent power producers
 - ◆ The loss of revenue from expired contracts may be partially offset by reductions in fuel costs and purchased power costs
 - ◆ Purchased power expenses increasing due to increased output from independent power producers and increased purchases of plant output at higher rates
-
- | | |
|--|---|
| ◆ American Electric Power | ◆ Jersey Central Power & Light |
| ◆ City of Tacoma, Department of Public Utilities, Light Division | ◆ Lansing Board of Water & Light |
| ◆ Dayton Power & Light Company | ◆ Nova Scotia Power Incorporated |
| ◆ Duke Energy Ohio | ◆ Public Service Company of New Mexico |
| ◆ El Paso Electric Company | ◆ Various AEP and FirstEnergy utilities |

Ms. Martha J. King, CPA Senior Consultant

Ms. Martha King, CPA, a Schumaker & Company associate, has more than 20 years of diverse management consulting experience. She has examined similar issues at various publicly-owned utilities, public power municipalities and agencies, manufacturing and health care companies. Ms. King has analyzed, documented, and verified information and data and created recommendations to solve many types of issues. Recommendations were created utilizing staff, management, and other inputs as appropriate to find workable solutions in multiple types of situations.

For this assignment, Ms. King will serve as:

- ◆ *Senior Consultant* for E1.2-Debt Service Obligations, E4.1-Capital and O&M Budgeting, and E5-Compliance with Debt Covenants

She has evaluated the forecasting/budgeting processes from initial company forecasts approved by the board to the detailed O&M and Capital budgets resulting from those planning documents. Resulting recommendations included improved process flow and project evaluation techniques utilized during the process. Ms. King has performed reviews of numerous electric utilities. She has also performed numerous studies for utility, government, manufacturing, health care, and service clients while operating an accounting firm, Accounting Advantage, and employed as an internal auditor with health care and manufacturing clients.

E1.2-Debt Service Obligations and E5-Compliance with Debt Covenants

Ms. King, CPA, has performed as *Lead Consultant* in this task area and analyzed, documented, and verified, through findings based on identifiable and measurable information and data financial management reviews. She has performed comprehensive reviews of the direct and indirect effects of borrowings and investments; short-term and long-term financial planning and analysis, debt management, budgeting, cash management, general accounting, property records, and tax management policies, procedures, and practices. And, thereby assessed the degree to which historical and projected activities have resulted in best practices. Her experience also includes numerous studies for utility, government, manufacturing and distribution, health, and retail clients while an auditor with Ernst and Young and numerous studies and analysis projects focused on regulated industry matters while with New England Electric System.

- | | |
|--------------------------------------|--|
| ◆ BellSouth Telecommunications, Inc. | ◆ Louisville Gas and Electric Company |
| ◆ Central Maine Power Company | ◆ New Jersey Board of Public Utilities |
| ◆ Commonwealth Telephone Company | ◆ Pacific Bell |
| ◆ Commonwealth Edison | ◆ Pacific Gas & Electric Company |
| ◆ Curoil | ◆ Pennsylvania Gas and Water Company |
| ◆ Duquesne Light Company | ◆ Pennsylvania Power & Light Company |
| ◆ Entergy Corporation | ◆ Qwest Colorado |
| ◆ Illinois Bell Telephone | ◆ Sempra Energy |
| ◆ Indianapolis Power & Light | ◆ St. Vincent Energy Services Ltd |

E4.1-Capital and O&M Budgeting

Ms. King, CPA, has examined similar issues including many management and operations reviews in which she investigated the cash forecasting and diversification of investments processes that are used between all subsidiary corporations with the intent of determining the details of a corporation and its affiliates' cash management methodologies. She has modeled detailed cash flow projections exceeding 20 years and summarized in a page document. She has compiled many cash flow statements for reporting purposes and for the internal decision making process. Additional evaluations have focused on the performance of an assessment of the cost of capital relative to the cost of capital to utilities with comparable risk.

- ◆ BellSouth Telecommunications, Inc.
- ◆ Central Maine Power Company
- ◆ Curoil
- ◆ Duquesne Light Company
- ◆ Hartland Township
- ◆ Illinois Bell Telephone
- ◆ Louisville Gas and Electric Company
- ◆ Pacific Bell
- ◆ Pacific Gas & Electric Company
- ◆ Pacific Telesis Group
- ◆ Pennsylvania Gas and Water Company
- ◆ Pennsylvania Power & Light Company
- ◆ Qwest Colorado
- ◆ Sempra Energy
- ◆ St. Vincent Energy Services Ltd
- ◆ U S WEST, Inc.



Mr. D. Kerry Laycock, CMC® Principal Consultant

Mr. Kerry Laycock, CMC®, a Schumaker & Company associate, has 29 plus years of experience as a management and organizational consultant, including participation on ten Schumaker & Company projects in the past seven years. In addition to his extensive experience with utility operational assessments he has completed many diverse management consulting assignments. He has been involved in a wide range of large-scale change initiatives and organizational restructurings, operational assessments, process re-engineering and municipal shared-services implementation. Recent projects include regional integration of local police services (including emergency communications), assessments of local delivery of Federal nutrition, lead abatement and housing programs, utility process and job redesign, municipal restructuring, and HR systems redesigns for payroll, performance management, disability management, employee selection and workforce planning. He began his career facilitating quality circles in the automotive industry. He began his career facilitating quality circles in the automotive industry. For this assignment, Mr. Laycock will serve as:

- ◆ *Principal Consultant* for E1.1.b-Current & Future Organizational Structure and E1.5.b-Customer Services

Mr. Laycock is a *Certified Management Consultant* (CMC®), as a member of the Institute of Management Consultants (IMC), holds a Bachelors of Business Administration in Management from Eastern Michigan University, and a Master's degree in organization development from Eastern Michigan University.

E1.1.b-Current & Future Organizational Structure

Mr. Laycock has been involved in a wide range of large-scale change initiatives and operational assessments. The primary focus of his work in recent years is organizational structure, work process and job design. Recent projects include utility process and job redesign, municipal restructuring and HR systems redesigns for payroll, disability management, employee selection and year-end compensation. He began his work facilitating quality circles in the automotive industry. Today his clients include business, government and nonprofit organizations.

To conduct a comprehensive assessment of operations, Mr. Laycock includes an evaluation of the current organizational structure and its ability to support a defined organizational strategy. In addition, he evaluates the existing operational practices, both in terms of efficiencies and effectiveness, thereby, assessing the size and structure of the organization in comparison to similarly-sized competitors, their organization and distribution of functions, and authority relationships within the organizational structure.

- ◆ Ann Arbor Transportation Authority
- ◆ City of Ann Arbor Housing Commission, Michigan
- ◆ City of Ann Arbor, Michigan
- ◆ City of Battle Creek, Michigan
- ◆ City of Dearborn, Michigan
- ◆ City of Detroit Childhood Lead Poisoning Prevention Program
- ◆ City of Southfield, Michigan
- ◆ Detroit Edison
- ◆ Edison Credit Union
- ◆ Equitable Gas Company
- ◆ Jersey Central Power & Light
- ◆ Minneapolis Park and Recreation Board
- ◆ PECO Energy Company
- ◆ Pennsylvania-American Water Company
- ◆ Philadelphia Gas Works
- ◆ State of Michigan Office of Financial and Insurance Regulation
- ◆ Town of Hilton Head Island, South Carolina
- ◆ United States Environmental Protection Agency
- ◆ Washtenaw County, Michigan
- ◆ Women, Infant and Children Nutrition Program City of Detroit, MI

E1.5.b-Customer Services

Mr. Laycock evaluates the customer service practices of staff and the Board, both to internal and external customers. The evaluation includes identification of past, current, and anticipated future customer service problem areas and recommended strategies to improve service delivery. Among the areas or issues to be addressed in this examination are:

- ◆ The capabilities and effectiveness of customer information and billing systems compared to systems used by other comparable companies and the training of customer service personnel in system utilization.
 - ◆ The reasonableness of staffing levels and overall performance of a call center, including validation of telephone access statistics, and appropriate use of interactive voice response (IVR) equipment and telecommunications technology in general.
- ◆ City of Ann Arbor Housing Commission, Michigan
 - ◆ City of Ann Arbor, Michigan
 - ◆ Equitable Gas Company
 - ◆ Philadelphia Gas Works
 - ◆ Pennsylvania-American Water Company
 - ◆ PECO Energy Company
 - ◆ Edison Credit Union



Mr. Robert L. Rosenkoetter, CPA

Principal Consultant

Mr. Rosenkoetter, CPA, a Schumaker & Company associate, has more than 30 years of experience as a consultant and functional expert on consulting engagements and management audits for a variety of regulated and unregulated industries as well as for local, national, and international government agencies and bodies. His experience and expertise includes the assessment and evaluation of operating and capital budgets, budgeting processes, financial management and affiliate relationships; the development and implementation of financial forecasting, budgeting, accounting and information systems; the evaluation of organizations, planning functions, productivity and work flow; and the identification of cost reduction opportunities. Mr. Rosenkoetter has been involved in over 35 general or focused management audits for public utility commissions, evaluating the area of financial management, including the operating and capital planning and budgeting functions. For this assignment, Mr. Rosenkoetter will serve as:

- ◆ *Team Lead* for E4-Annual Budgeting
- ◆ *Principal Consultant* for E2-Debt Service Obligations and E5-Compliance with Debt Covenants and *Senior Consultant* for E3-Fuel & Purchased Power

He has provided consulting assistance to the following electric utilities:

- | | | |
|--------------------------------|---|---|
| ◆ CMS Energy | ◆ Guam Power Authority | ◆ Potomac Electric Power Company |
| ◆ Colorado Springs Utilities | ◆ Indianapolis Power & Light Company | ◆ Public Service Company of NM |
| ◆ Commonwealth Edison Company | ◆ Jersey Central Power & Light Company | ◆ Puerto Rico Electric Power Authority |
| ◆ Dayton Power & Light Company | ◆ Nebraska Public Power District | ◆ Rockland Electric Company |
| ◆ Duke Energy Indiana | ◆ Orange and Rockland Utilities | ◆ Sacramento Municipal Utilities District |
| ◆ Duke Energy Ohio, Inc. | ◆ Pacific Gas & Electric Company | ◆ San Diego Gas & Electric Company |
| ◆ Electricity of Vietnam (EVN) | ◆ PECO Energy Company | ◆ Semptra Energy |
| ◆ El Paso Electric Company | ◆ PLN (public power company of Indonesia) | ◆ Texas Utilities |
| ◆ Florida Power Corporation | ◆ Potomac Edison Company | ◆ Russia's electric power industry |
| ◆ Georgia Power Company | | |

He was also the *Project Manager* for a zero-based budgeting and productivity improvement project involving budget development, training, and analysis for three annual budget cycles for all government ministries and twenty of the largest state-owned enterprises for the Government of Greece. He was also involved in a multi-year project developing a financial forecasting and budget system for Pertamina, the state-owned oil company of Indonesia. Prior to beginning his consulting career, Mr. Rosenkoetter was employed as a financial analyst in the budget department of an international petrochemical company, responsible for budget consolidation and evaluation of capital expenditure proposals. Mr. Rosenkoetter earned both an MBA in Finance and MPA (Master of Professional Accountancy) from Georgia State University, after receiving a BS in Business Administration from Auburn University.

E4-Annual Budgeting

Mr. Rosenkoetter, CPA, has performed as *Lead Consultant* in this task area and analyzed, documented, and verified, through findings based on identifiable and measurable information and data financial management reviews. Financial management entails planning for the future of a business enterprise with the aim of ensuring a positive cash flow. He has performed comprehensive reviews to examine the process of managing the financial resources, including accounting and financial reporting, budgeting, collecting accounts receivable, risk management, and insurance. He has examined the direct and indirect effects of borrowings and investments; short-term and long-term financial planning and analysis, budgeting, cash management, general accounting, property records, and tax management policies, procedures, and practices. And, thereby assessed the degree to which historical and projected activities have resulted in best practices.

- ◆ Alltel Pennsylvania
- ◆ California Deaf and Disabled
- ◆ Cincinnati Bell Telephone Company
- ◆ City of Colorado Springs, CO
- ◆ Colorado Springs Utilities
- ◆ Company/ American Water
- ◆ Contel of Illinois
- ◆ Dayton Power & Light Company
- ◆ Duke Energy Ohio
- ◆ Equitable Gas Company/EQT
- ◆ EVN (Electricity of Vietnam)
- ◆ GTE
- ◆ Guam Power Authority
- ◆ Guam Telephone Authority
- ◆ Illinois Bell Telephone Company
- ◆ Jersey Central Power & Light
- ◆ National Fuel Gas Company
- ◆ Orange and Rockland Utilities
- ◆ PECO Energy Company/Exelon
- ◆ Pennsylvania-American Water Philadelphia Gas Works
- ◆ PLN
- ◆ Potomac Edison Company
- ◆ Public Service Company of New Mexico
- ◆ Rockland Electric
- ◆ San Diego Gas & Electric
- ◆ Sempra Energy
- ◆ Southern New England Telephone Company
- ◆ Telecommunications Program
- ◆ Telephone Electronics Corporation
- ◆ United Telephone of Pennsylvania

According to known methodologies and global best practices, all company initiatives and projects must be aligned with the corporate strategy and business plan in order to maximize their effectiveness, produce real value and contribute to growth. Mr. Rosenkoetter helps align organizational strategy, structure, controls, culture, and capability so that new futures are possible. During an engagement, his responsibilities may include the review of organizational units, policies, and systems relating to all accounting and finance functions.

- ◆ City of Colorado Springs, CO
- ◆ Fulton County, GA
- ◆ GTE
- ◆ Jersey Central Power & Light
- ◆ Orange and Rockland Utilities
- ◆ Potomac Edison Company
- ◆ Tennessee-American Water Company
- ◆ Verizon New York



E2-Debt Service Obligations and E5-Compliance with Debt Covenants

Mr. Rosenkoetter, CPA, has performed as *Lead Consultant* in this task area and analyzed, documented, and verified, through findings based on identifiable and measurable information and data financial management reviews. Financial management entails planning for the future of a business enterprise with the aim of ensuring a positive cash flow. He has performed comprehensive reviews to examine the process of managing the financial resources, including accounting and financial reporting, debt management, budgeting, collecting accounts receivable, risk management, and insurance. He has examined the direct and indirect effects of borrowings and investments; short-term and long-term financial planning and analysis, budgeting, cash management, general accounting, property records, and tax management policies, procedures, and practices. And, thereby assessed the degree to which historical and projected activities have resulted in best practices.

- ◆ Alltel Pennsylvania
- ◆ California Deaf and Disabled
- ◆ Cincinnati Bell Telephone Company
- ◆ City of Colorado Springs, CO
- ◆ Colorado Springs Utilities
- ◆ Company/ American Water
- ◆ Contel of Illinois
- ◆ Dayton Power & Light Company
- ◆ Duke Energy Ohio
- ◆ Equitable Gas Company/EQT
- ◆ EVN (Electricity of Vietnam)
- ◆ GTE
- ◆ Guam Power Authority
- ◆ Guam Telephone Authority
- ◆ Illinois Bell Telephone Company
- ◆ Jersey Central Power & Light
- ◆ National Fuel Gas Company
- ◆ Orange and Rockland Utilities
- ◆ PECO Energy Company/Exelon
- ◆ Pennsylvania-American Water Philadelphia Gas Works
- ◆ PLN
- ◆ Potomac Edison Company
- ◆ Public Service Company of New Mexico
- ◆ Rockland Electric
- ◆ San Diego Gas & Electric
- ◆ Sempra Energy
- ◆ Southern New England Telephone Company
- ◆ Telecommunications Program
- ◆ Telephone Electronics Corporation
- ◆ United Telephone of Pennsylvania

E3-Fuel & Purchased Power

Mr. Rosenkoetter's specific fuels management experience includes work as a *Lead Consultant* with responsibilities in the review of bid solicitation and the evaluation process for procurement of coal, assessing the organizational separation of regulated and non-regulated affiliates in relation to the fuel procurement function, and preparing testimony for hearings. He has assisted in reviews of various methods and technologies used to monitor and track fuel inventories, fuel purchases, and fuel dispensed, including review computation of monthly fuel clause filings and determine their accuracy and documentation of the business process and support; reviews of compliance with the objectives to provide for adequate regulatory review of utility operations under its fuel clause, provide for the stability of utility earning when electric fuel costs and purchased power costs are rising, permit prompt credits to customers when electric fuel costs and purchased power costs are declining, and flow through to electricity users the increases and decreases in applicable fuel and purchased power costs per kWh of delivered energy above or below a base cost; and reviews of the monthly fuel clause filings and determine if there are accurate applicable kWh purchases and sales and that the base fuel and purchased power expense calculations are correct.

- ◆ El Paso Electric Company
- ◆ Duke Energy Ohio
- ◆ Public Service Company of New Mexico
- ◆ Dayton Power & Light Company
- ◆ Georgia Power Company

Ms. Gail E. Stopar

Consultant & Analyst

Ms. Gail Stopar possesses 24 plus years of business and personnel management, corporate and academic training, software engineering, and technical writing experience in the computer, banking, and automotive industries. She has comprehensive experience in leading documentation and training areas and in composing, editing, and maintaining documents, databases, Web sites, and spreadsheets. Additionally, Ms. Stopar has extensive cross-functional experience in computer software/tools, quality methodology, and software engineering. Her experience has demonstrated her ability to interact and communicate effectively across all organizational levels, to develop and teach employees, management, and public courses, to work independently or as part of a team, to prioritize and problem-solve effectively during crunch times and/or while multi-tasking, and to service both internal and external customers.

Ms. Stopar has been a *Support Consultant & Analyst* on many management and operations reviews. Her management audit work has focused on management and operations assessments and performance reviews; process analysis; affiliated transactions and cost allocations; customer satisfaction and needs assessments; and support services. She supports team consultants with any client interviews and report details that may need spreadsheet preparation, data analysis, research investigation, or tables and graphics. Ms. Stopar also provides investigational assistance including data and statistics research and benchmarking analysis during operational reviews and management audits in order to gain perspective on organizational and financial performance.

Ms. Stopar holds an MSA in Human Resource Management from Central Michigan University and a BS in Quality Management from Cleary University. She also holds an Associate in Liberal Arts with a concentration in Business/Computer Science from Schoolcraft College and a Certificate in Accounting from Oakland Community College.

Utility Experience

Some of Ms. Stopar's utility assignments are listed below:

Electric Utilities	Gas Utilities	Water/Wastewater Utilities
♦ Duke Energy Ohio, Inc.	♦ Equitable Gas Company	♦ Pennsylvania-American Water Company
♦ Jersey Central Power and Light	♦ (EQT Corp.)	♦ Tennessee-American Water Company
♦ PECO Energy Company	♦ Philadelphia Gas Works	♦ Water Services Corporation of SC



Ms. Jaye M. Kain

Project Administrator & Analyst

Ms. Jaye M. Kain has over 20 years of business experience. Her background, which includes a blend of experience in project administration and management, training, scientific research, and grant writing, provides her with a unique perspective from which to manage investigations and evaluate their findings. Her communication skills make her a natural facilitator for the assimilation of data produced by seemingly disparate specialties.

Ms. Kain holds one Bachelor's degree in Environmental Geoscience and a second Bachelor's degree in Geology from Edinboro University of Pennsylvania. She also holds a Master of Science in Geology from the University of Michigan.

In the conduct of comprehensive and focused management and operations audits, Ms. Kain manages the Schumaker & Company project platform built to address both technical and administrative issues during the course of any project. To this end, Schumaker & Company is dedicated to ensuring that a thorough, detailed work plan is developed and executed, and that the project is completed on schedule, within budget. Ms. Kain provides Schumaker & Company with analytical support for diagnostic review of functional areas and in-depth analyses of pre-identified project issues. Analytical work performed on Schumaker & Company projects can be robust and fit for purpose, but Ms. Kain's ability to quickly adapt and respond to changing business focus helps projects stay the course.

Combining Internet/computer technology, Schumaker & Company developed a package of tools which enhanced collaboration with document management and issue tracking. Ms. Kain uses conventional, as well as the Schumaker & Company proprietary, project management and control tools and techniques to maintain data integrity, track interview and information requests, establish specific consultant and client interview times and confirmations, send information requests and reports electronically, and organize document filing/retrieval through a built-in cross-referencing system between the database and paper files.

- ◆ Dayton Power & Light Company
- ◆ Duke Energy Ohio
- ◆ El Paso Electric Company
- ◆ Equitable Gas Company/EQT
- ◆ Jersey Central Power & Light
- ◆ Michigan Public Service Commission
- ◆ Nova Scotia Power Incorporated
- ◆ Pennsylvania-American Water Company/American Water
- ◆ PECO Energy Company/Exelon
- ◆ Philadelphia Gas Works
- ◆ Tennessee-American Water Company/American Water
- ◆ Water Services Corporation of South Carolina

E. Estimated Project Team Hours

Schumaker & Company has estimated a total of 4,272 project team hours for all tasks as shown in Exhibit V-6. Person day estimates can be determined by dividing hours by eight.

Exhibit V-6
Estimated Hours

Staff Member	Patricia Schumaker	Dennis Schumaker	D. Kerry Laycock	Lee Burgess	Eugene Johnson	Martha King	Robert Rosenkoetter	Gall Stopar	Jaye Kaln	Total Hours
Rate	\$245	\$245	\$225	\$225	\$205	\$205	\$225	\$125	\$75	
Step I - Project Orientation and Final Work Plan	32	48	32	32	32	32	32	32	32	304
Step II - Detailed Review and Analysis	440	344	160	424	600	272	400	64	0	2,704
E1 Construction and Capital Program Planning	248	192	160	424	304	0	0	64	0	1,392
E 1.1 Corporate Mission, Objectives, Goals, Planning	16			64						80
E 1.1.a Executive Management	16			64						80
E 1.1.b Current and Future Organization Structure	16		40							56
E 1.1.c Board of Trustees	16			40						56
E 1.1.d Communications and Control	16			40						56
E 1.1.e Strategic Planning	16			40						56
E 1.1.f Outside Services	40			24						64
E 1.1.g Enterprise Risk Management	16			40						56
E 1.2 System Planning		24			64					88
E 1.3 Program and Project Planning & Management	40	40								80
E 1.4 Performance and Results Management	40			64						104
E 1.5 Efficiency of the Authority's Operations		24		48						72
E 1.5.a Work Management		40			120					160
E 1.5.b Customer Services	16		120					64		200
E 1.5.c Transmission and Distribution		64			120					184
E 2 Debt Service Obligations	56	0	0	0	0	184	184	0	0	424
E 2.1 Application of Industry Standards to Manage Debt	8					40	40			88
E 2.2 Receipt of Necessary Approval for Debt Management	8					24	24			56
E 2.3 Audit of Debt Management Practices	8					24	24			56
E 2.4 Effectiveness of Risk Management Techniques	8					24	24			56
E 2.5 Effectiveness of the Ratemaking Model Relative to Meeting the Authorities Debt Obligations	8					24	24			56
E 2.6 Background Events that led to the Establishment of the Shoreham Acquisition Adjustments and Subsequent Changes to the Adjustment	8					24	24			56
E 2.7 Cash Reserve Policy	8					24	24			56
E 3 Fuel & Purchased Power	80	152	0	0	256	0	128	0	0	616
E 3.1 LIPA's Active & Effective Involvement in NYISO Issues/Operations as Well as Other Regional Entities		24			64					88
E 3.2 LIPA's FPP Contract Management, Including FMBSA and EMA		24			64					88
E 3.3 LIPA's Supply Procurement		64			64					128
E 3.4 LIPA's FPP Cost Adjustment Clause Tariff Leaf 166	40						64			104
E 3.5 LIPA's FPP Cost Recovery	40						64			104
E 3.6 Load Forecasting		40			64					104
E 4 Annual Budgeting	40	0	0	0	40	40	40	0	0	160
E 4.1 Capital & O&M Budgeting						40	40			80
E 4.2 Program/Project Planning and Management	40				40					80
E 5 Compliance and Debt Covenants	16	0	0	0	0	48	48	0	0	112
E 5.1 Compliance with All Debt Covenants	8					24	24			56
E 5.2 Management of Debt Covenant Requirements	8					24	24			56
Project Management	64	80						80	240	464
Step III - Report Preparation	120	120	80	80	80	80	80	80	80	800
Total Hours	656	592	272	536	712	384	512	256	352	4,272

In conducting these investigations, approximately 60% of the Schumaker & Company project team's hours will be spent on-site.



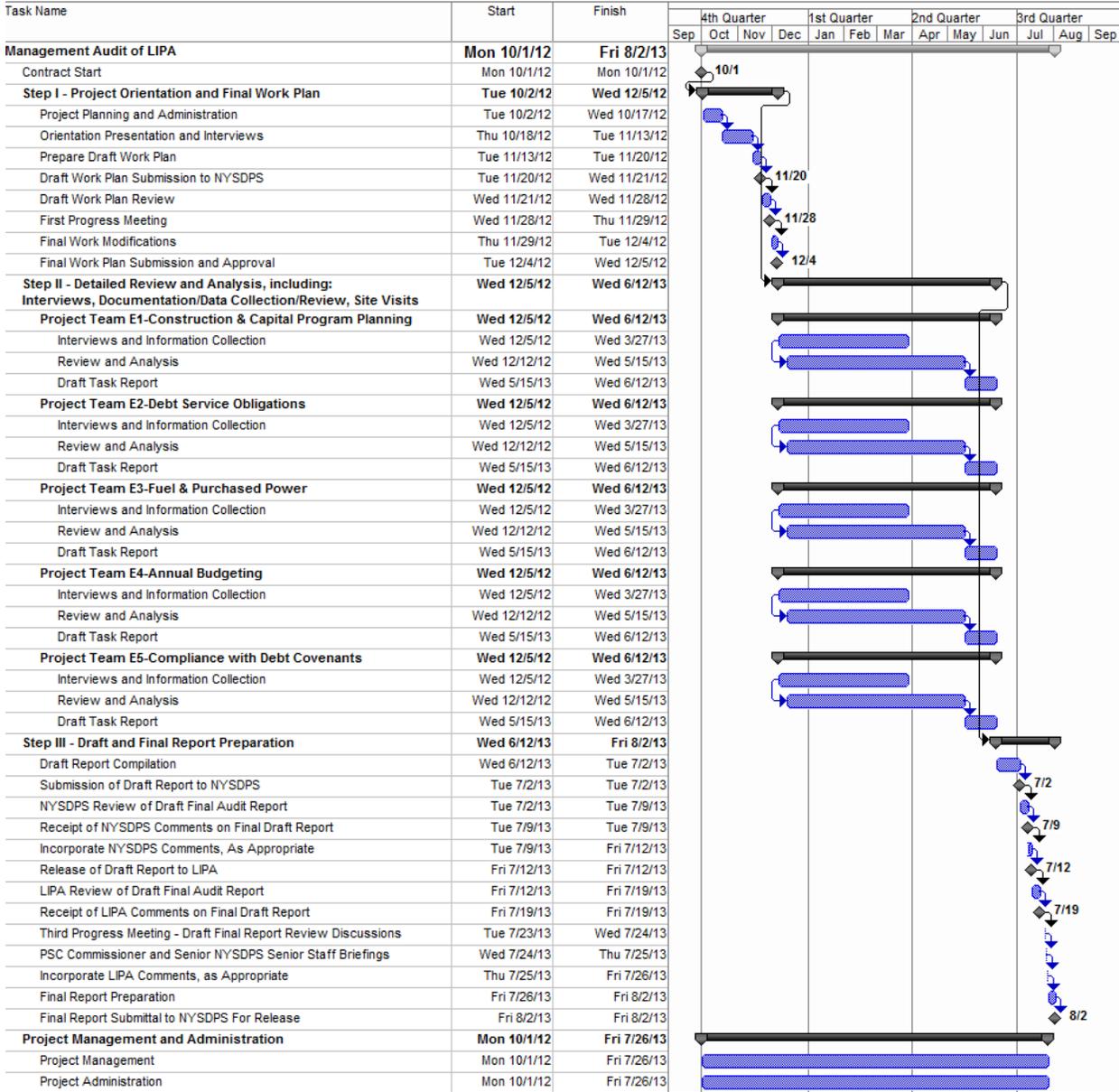
VI. Schedule and Budgets

This chapter presents the proposed schedule and budgets for the Schumaker & Company project team to perform the forthcoming management audit of LIPA.

A. Proposed Project CPM Schedule

The Schumaker & Company project team uses computer-based management tools to assist in managing projects. The *Microsoft Project for Windows* application used by our project team permits the resource loading of critical path method (CPM) schedules and allows careful tracking of all activities. The application includes a wide variety of graphics options for printing charts that graphically represent the present status of the project and the scheduled work. Our overall project schedule is shown in *Exhibit VI-1*.

**Exhibit VI-1
Preliminary Project CPM Schedule**



We will work closely with NYSDPS and LIPA staff to meet the deadlines of this project, which are met by the project schedule above. Besides assistance described in the RFP, we ask that LIPA respond to information requests within 10 days and interview requests within five days as a means to keep the project on schedule. The NYSDPS staff can help in expediting the audit by frequent interaction, as necessary, with the Schumaker & Company team.

B. Project Costs

Our overall total project cost (showing individual professional fees, out-of-pocket travel, expenses and supplies and materials expenses separately stated) is shown in *Exhibit VI-2*.

Exhibit VI-2
Project Summary Costs

Professional Fees	\$885,840
Travel Expenses	\$125,897
Services and Materials	\$26,575
	\$1,038,312

A description of our approach to this project is provided in detail in *Chapter III – Approach, Methods, and Project Management*, although the exhibits in this chapter reflect the tasks and steps described in that chapter.

We have estimated a total of 4,272 project team hours for all tasks as shown in *Exhibit VI-3* (by task area and staff member) and *Exhibit VI-4* (by staff member), with total professional fees of \$885,840, plus out-of-pocket travel, expenses and supplies and materials expenses, for a total project of \$1,038,312.

Exhibit VI-3
Total Hours and Costs by Task Area and Staff Member

Staff Member	Patricia Schumaker	Dennis Schumaker	D. Kerry Laycock	Lee Burgess	Eugene Johnson	Martha King	Robert Rosenkoetter	Gall Stopar	Jaye Kaln	Total Hours	Total Fees
Rate	\$245	\$245	\$225	\$225	\$205	\$205	\$225	\$125	\$75		
Step I - Project Orientation and Final Work Plan	32	48	32	32	32	32	32	32	32	304	\$60,720
Step II - Detailed Review and Analysis	440	344	160	424	600	272	400	64	0	2,704	\$600,240
E1 Construction and Capital Program Planning	248	192	160	424	304	0	64	0	0	1,392	\$309,520
E 1.1 Corporate Mission, Objectives, Goals, Planning	16			64						80	\$18,320
E 1.1.a Executive Management	16			64						80	\$18,320
E 1.1.b Current and Future Organization Structure	16		40							56	\$12,920
E 1.1.c Board of Trustees	16			40						56	\$12,920
E 1.1.d Communications and Control	16			40						56	\$12,920
E 1.1.e Strategic Planning	16			40						56	\$12,920
E 1.1.f Outside Services	40			24						64	\$15,200
E 1.1.g Enterprise Risk Management	16			40						56	\$12,920
E 1.2 System Planning		24			64					88	\$19,000
E 1.3 Program and Project Planning & Management	40	40								80	\$19,600
E 1.4 Performance and Results Management	40			64						104	\$24,200
E 1.5 Efficiency of the Authority's Operations		24		48						72	\$16,680
E 1.5.a Work Management		40			120					160	\$34,400
E 1.5.b Customer Services	16		120					64		200	\$38,920
E 1.5.c Transmission and Distribution		64			120					184	\$40,280
E 2 Debt Service Obligations	56	0	0	0	0	184	184	0	0	424	\$92,840
E 2.1 Application of Industry Standards to Manage Debt	8					40	40			88	\$19,160
E 2.2 Receipt of Necessary Approval for Debt Management	8					24	24			56	\$12,280
E 2.3 Audit of Debt Management Practices	8					24	24			56	\$12,280
E 2.4 Effectiveness of Risk Management Techniques	8					24	24			56	\$12,280
E 2.5 Effectiveness of the Ratemaking Model Relative to Meeting the Authorities Debt Obligations	8					24	24			56	\$12,280
E 2.6 Background Events that led to the Establishment of the Shoreham Acquisition Adjustments and Subsequent Changes to the Adjustment	8					24	24			56	\$12,280
E 2.7 Cash Reserve Policy	8					24	24			56	\$12,280
E 3 Fuel & Purchased Power	80	152	0	0	256	0	128	0	0	616	\$138,120
E 3.1 LIPA's Active & Effective Involvement in NYISO Issues/Operations as Well as Other Regional Entities		24			64					88	\$19,000
E 3.2 LIPA's FPP Contract Management, Including FMBSA and EMA		24			64					88	\$19,000
E 3.3 LIPA's Supply Procurement		64			64					128	\$28,800
E 3.4 LIPA's FPP Cost Adjustment Clause Tariff Leaf 166	40						64			104	\$24,200
E 3.5 LIPA's FPP Cost Recovery	40						64			104	\$24,200
E 3.6 Load Forecasting		40			64					104	\$22,920
E 4 Annual Budgeting	40	0	0	0	40	40	40	0	0	160	\$35,200
E 4.1 Capital & O&M Budgeting						40	40			80	\$17,200
E 4.2 Program/Project Planning and Management	40				40					80	\$18,000
E 5 Compliance and Debt Covenants	16	0	0	0	0	48	48	0	0	112	\$24,560
E 5.1 Compliance with All Debt Covenants	8					24	24			56	\$12,280
E 5.2 Management of Debt Covenant Requirements	8					24	24			56	\$12,280
Project Management	64	80						80	240	464	\$63,280
Step III - Report Preparation	120	120	80	80	80	80	80	80	80	800	\$161,600
Total Hours	656	592	272	536	712	384	512	256	352	4,272	\$885,840
Total Fees	\$160,720	\$145,040	\$61,200	\$120,600	\$145,960	\$78,720	\$115,200	\$32,000	\$26,400		
Hours	656	592	272	536	712	384	512	256	352	4,272	
Days On Site	39.4	35.5	16.3	32.2	42.7	23.0	30.7	5.1	3.5		
AirFare Rate	\$800	\$800	\$800	\$800	\$800	\$800	\$800	\$800	\$800		
AirFare	\$10,400	\$9,600	\$4,000	\$8,800	\$11,200	\$6,400	\$8,000	\$1,600	\$800		\$60,800
Trans	\$1,970	\$1,775	\$815	\$1,610	\$2,135	\$1,150	\$1,535	\$255	\$175		\$11,420
Hotel	\$6,304	\$5,680	\$2,608	\$5,152	\$6,832	\$3,680	\$4,912	\$816	\$560		\$36,544
Diem	\$2,364	\$2,130	\$978	\$1,932	\$2,562	\$1,380	\$1,842	\$306	\$210		\$13,704
Other	\$591	\$533	\$245	\$483	\$641	\$345	\$461	\$77	\$53		\$3,429
Travel Expenses	\$21,629	\$19,718	\$8,646	\$17,977	\$23,370	\$12,955	\$16,750	\$3,054	\$1,798		\$125,897
Services & Materials											\$26,575
Total Costs	\$182,349	\$164,758	\$69,846	\$138,577	\$169,330	\$91,675	\$131,950	\$35,054	\$28,198		\$1,038,312

**Exhibit VI-4
Total Hours and Costs by Staff Member**

<i>Staff Member</i>	Patricia Schumaker	Dennis Schumaker	D. Kerry Laycock	Lee Burgess	Eugene Johnson	Martha King	Robert Rosenkoetter	Gall Stopar	Jaye Kain	<i>Total Hours</i>	<i>Total Fees</i>
<i>Rate</i>	\$245	\$245	\$225	\$225	\$205	\$205	\$225	\$125	\$75		
<i>Total Hours</i>	656	592	272	536	712	384	512	256	352	4,272	\$885,840
<i>Total Fees</i>	\$160,720	\$145,040	\$61,200	\$120,600	\$145,960	\$78,720	\$115,200	\$32,000	\$26,400		
<i>Travel Expenses</i>	\$21,629	\$19,718	\$8,646	\$17,977	\$23,370	\$12,955	\$16,750	\$3,054	\$1,798		\$125,897
<i>Services & Materials</i>											\$26,575
<i>Total Costs</i>	\$182,349	\$164,758	\$69,846	\$138,577	\$169,330	\$91,675	\$131,950	\$35,054	\$28,198		\$1,038,312

Hours and Professional Fees

Based on our past experience, staff hours were determined by estimating the number of staff hours for each task area using the work breakdown structure. These hours were then used to determine the total expected costs of the project for our professional fees, including travel costs and supplies and materials, using our project cost estimating model.

Schumaker & Company consultants would be available for testimony at the conclusion of the project, if necessary, at our standard billing rates.

Travel Expenses

In conducting these investigations, approximately 60% of the Schumaker & Company project team's hours will be spent on-site. Travel expenses have been estimated based on this level of on-site involvement. Our normal practice is to attempt to schedule on-site trips as far in advance as possible to take advantage of discounted coach fares. We also anticipate spending a minimum of four days on site during each trip to minimize the number of trips needed. We would expect that we might be able to stay at hotels where LIPA or NYSDPS has arranged discounted rates. Much of the document review and report writing tasks will be performed in our offices, rather than at the LIPA site. This also allows us to keep our costs down.

Services and Materials Expenses

All services and materials expenses are billed through as a percentage (3% of professional fees) on the invoice for the time period in which they were incurred. In calculating estimated supplies and materials costs, the assumption has been made that LIPA will provide office space, telephones, and access to copying and fax services while our project team consultants are on-site. Our price includes provision of the following:

- ◆ Electronic copies of the task reports and draft reports, and 10 copies of the final report
- ◆ Copying and miscellaneous supplies



- ◆ Communications, including telephone, overnight freight, postage, and facsimile transmission while not on-site

Our normal procedure for all task and draft reports is to transmit an electronic version of the report, which can be printed locally and any necessary copies made for distribution from that local copy. If Staff determines that printed copies of the final report are required, we would expect separate reimbursement for those costs.

On-Site Space

The consultant team will require approximately 500 square feet of office space, with three to four desks (or equivalent table space) – an unused conference room would be sufficient, two locking file cabinets, and one additional table for setting up a printer, which we will provide. We will also require access to a copier and a fax machine while on-site.

We will need high speed Internet access with the capability of establishing a virtual private network (VPN) connection to our office network. This can either be provided through a connection to the utility's LAN with a firewall that permits VPN connections or through a totally separated high speed connection to the Internet (DSL or fractional T1).

Schumaker & Company will use our own laptops and will provide a portable printer at any job site, if appropriate. As a result, the office space provided will need to be secure, so that consultants can leave their equipment and printer overnight.

C. Invoicing Procedures

Schumaker & Company normally submits a monthly invoice for fees and expenses associated with the project (along with our monthly progress report). The invoice will include the following categories: professional fees and travel expenses (transportation, meals, lodging, etc.).

- ◆ **Professional fees** are determined by multiplying the time the consultant spends on these investigations during the reporting period by the individual's professional billing rate.
- ◆ **Travel expenses** are actual expenses, based on cost, reported semi-monthly by consultants assigned to the study. They include transportation, meals, lodging, etc.
- ◆ **Services and materials** billed as a percentage as discussed above. These include editing, word processing, laptop computer usage, copying and report printing, and communications (postage, overnight freight, facsimile, telephone, etc.). The estimate provided in this proposal is a not-to-exceed cost for these expenses.

We ask that payment be made via ACH direct deposit within 30 days. Our accounting records are available in our Ann Arbor office for inspection and audit.

VII. Experience and Qualifications

This chapter presents the team that Schumaker & Company will assign to this project and describes the experience and qualifications of the firm. In this chapter we identify the Schumaker & Company contact and describe the project team, qualifications of each project team member for this engagement, and project management members for this assignment. Our proposed project team brings considerable experience with regulatory commissions as illustrated in *Exhibit VII-1*.

Exhibit VII-1 Commission Experience

UTILITY COMMISSIONS

Alaska Public Utilities Commission	Nevada Public Service Commission
Arizona Corporation Commission	New Mexico Public Regulation Commission
Arkansas Public Service Commission	New Jersey Board of Public Utilities
California Public Utilities Commission	New Mexico Public Regulation Commission
Colorado Public Utilities Commission	New York Public Service Commission
Idaho Public Utilities Commission	North Dakota Public Service Commission
Illinois Commerce Commission	Oregon Public Utilities Commission
Indiana Utility Regulatory Commission	Pennsylvania Public Utility Commission
Iowa Utilities Board	Public Utility Commission of Ohio
Kansas Corporation Commission	Public Utility Commission of S. Carolina
Kentucky Public Service Commission	Public Utility Commission of Texas
Maine Public Utilities Commission	Public Service Commission of Utah
Maryland Public Service Commission	Public Service Commission of Wisconsin
Massachusetts Department of Public Utilities	South Carolina Office of Regulatory Staff
Michigan Public Service Commission	South Dakota Public Utilities Commission
Minnesota Public Utilities Commission	Tennessee Regulatory Authority
Mississippi Public Service Commission	Tennessee Valley Authority
Montana Public Service Commission	WA Utilities & Transportation Commission
Nebraska Public Service Commission	Wyoming Public Service Commission

Schumaker & Company's senior consultants have extensive experience in management, operations, and technology consulting in a project environment. They typically hold advanced degrees and average more than 25 years of professional experience. Our proposed project team is expert in the technical aspects of electric, gas, water, and telecommunications operations, as well as relevant regulatory proceedings.

Our proposed project team brings considerable experience in performing utility audits as illustrated by the electric, gas, and water/wastewater companies audited in *Exhibit VII-2*. This knowledge base makes our firm uniquely qualified for the most complex and demanding of assignments.



Exhibit VII-2
Utility Audit Experience

ELECTRIC, GAS, & WATER/WASTEWATER UTILITIES

AEP/Kentucky	Michigan Wisconsin Pipeline
AEP/Kingsport Power Company	Missouri Public Service Company
AEP/Ohio Power Company	Nantucket Electric Company (National Grid)
AEP/West Texas Utilities Company	Nebraska Public Power District
Alpena Power Company	New Jersey Natural Gas Company
American Natural Resources	New Orleans Public Service Inc.
Arkansas Power and Light Company/Entergy Corporation	Niagara Mohawk Corporation
Baltimore Gas & Electric Company	Nova Scotia Power Incorporated
Bangor Hydro-Electric	NSTAR Electric Company
Central Maine Power Company	Pacific Gas and Electric Company
Cincinnati Gas and Electric Company (CG&E)	PECO Energy Company
Cleveland Electric Illuminating Company	Pennsylvania American Water Company
Columbia of Maryland, Inc.	Pennsylvania Gas & Water Company
Columbus Southern Power Company	Pennsylvania Power & Light Company
Conectiv	People's Natural Gas Company
Consumers Power Company (Consumers Energy)	Philadelphia Gas Works
Cooperative Power Association	Philadelphia Suburban Water Company
Dayton Power and Light Company	Public Service Company of New Mexico
Detroit Edison Company	Public Service Electric and Gas Company
Duke Energy Kentucky	Rockland Electric Company
Duke Energy Indiana	Sierra Pacific Power Company
Duke Energy Ohio	Springfield City Utilities
El Paso Electric Company	Southern California Edison Company
Electricity Supply Board of Ireland	Southern California Gas Company
Elizabethtown Gas Company/NUI Corporation	South Jersey Gas Company
Empire Electric District Company	Sunflower Electric Cooperative
Enbridge	Tacoma Power
Equitable Gas Company	Tennessee-American Water Company
Florida Power and Light Company	Tennessee Valley Authority
Georgia Power Company	Toledo Edison Company
General Waterworks Corporation (Pine Bluff)	Twin Lakes Utilities Indiana
GPU Energy	Union Electric Power Company
Illinois Electric Co., Illinois Power Co.	Union Light, Heat and Power Company/CG&E
Indiana Michigan Power Company	United Water New Jersey
Iowa-Illinois Gas & Electric Company	Upper Peninsula Power Company
Jacksonville Electric Authority	Utilicorp United, Inc.
Jersey Central Power & Light Company	Washington Gas Light Company
Kentucky-American Water Company	Water Services Corporation
Maine Electric Power Company	Western Kentucky Gas Company
Massachusetts Electric Company (National Grid)	Western Massachusetts Electric Company
Metropolitan Edison Company	Wisconsin Electric Power Company
Michigan South Central Power Agency	

A. Experience and Qualifications of Individual Consultants

Please refer to *Appendix A – Consultant Resumes* for a detailed description of the experience and qualifications for all consultants who will be assigned to the project.

B. Experience and Qualifications of the Firm

Please refer to *Appendix B – Firm Qualifications* for a detailed description, including references, of Schumaker & Company’s experience and qualifications.

C. Work Samples

The following table provides a partial list of our most relevant and recent projects for management, operations, and technology audits of utility companies on behalf of state regulatory commissions. Due to their size, our *Audit Report Sample* has been provided electronically via web link, as follows:

Jersey Central Power & Light Company (JCP&L)

- ◆ *Final Report:* <http://www.bpu.state.nj.us/bpu/pdf/announcements/jcplfinal.pdf>

PECO Energy

- ◆ *Volume I:* <http://www.puc.state.pa.us/PCDOCS/681316.pdf>
- ◆ *Volume II:* <http://www.puc.state.pa.us/PCDOCS/681317.pdf>

Equitable Gas Company (EGC)

- ◆ *Final Report:* <http://www.puc.state.pa.us//pcdocs/1095768.pdf>

Philadelphia Gas Works (PGW):

- ◆ *Final Report:* <http://www.puc.state.pa.us//PCDOCS/1032666.pdf>

Pennsylvania-American Water Company

- ◆ *Volume I:* <http://www.puc.state.pa.us/PCDOCS/1026732.pdf>
- ◆ *Volume II:* <http://www.puc.state.pa.us//PCDOCS/1026733.pdf>
- ◆ *Volume III:* <http://www.puc.state.pa.us//PCDOCS/1026755.pdf>



VIII. Forms

Included on the following pages are the completed forms for items included in the RFP.

M/WBE Participation Forms

- ◆ M/WBE Utilization Plan (Form 104)
- ◆ Request For Waiver (Form 105)

Schumaker & Company, Inc. is not a certified minority- and/or women-owned business enterprise in New York State; however, our firm is certified as a women-business enterprise (WBE) in Michigan, Pennsylvania, New Jersey, North Carolina, California, Illinois, and Delaware. We also understand the reasons why LIPA wishes to have participation by certified firms on this project. As such, we went to <http://www.esd.ny.gov/mwbe.html> and downloaded files and reports by SIC code and by product code covering categories such as management/business consultants, energy consultants, utility consultants, etc. We visited websites to understand further the capabilities of these firms; however, we do not believe that the firms had the specific background needed for conducting this audit of LIPA's operations.

Other

- ◆ Non-Collusive Bidding Certification
- ◆ Nondiscrimination in Employment in Northern Ireland
- ◆ Offerer Disclosure of Prior Non-Responsibility Determinations
- ◆ Contingent Fee Certification

M/WBE UTILIZATION PLAN

INSTRUCTIONS: This form must be submitted with any bid, proposal, or proposed negotiated contract or within a reasonable time thereafter, but prior to contract award. This Utilization Plan must contain a detailed description of the supplies and/or services to be provided by each certified Minority and Women-owned Business Enterprise (M/WBE) under the contract. Attach additional sheets if necessary.

Offeror's Name: Schumaker & Company, Inc.
Address: 3101 Walnut Ridge Drive
City, State, Zip Code: Ann Arbor, MI 48103
Telephone No.: 734-998-5550
Region/Location of Work: Long Island, NY/ALbany, NY/MI HQ/Home Offices

Federal Identification No.: 38-2625897
Solicitation No.: Matter No. 12-00314
Project No.: Matter No. 12-00314
M/WBE Goals in the Contract: Overall 20% MBE % WBE %

1. Certified M/WBE Subcontractors/Suppliers Name, Address, Email Address, Telephone No.	2. Classification	3. Federal ID No.	4. Detailed Description of Work (Attach additional sheets, if necessary)	5. Dollar Value of Subcontracts/Supplies/Services and intended performance dates of each component of the contract.
A.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			
B.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			

6. IF UNABLE TO FULLY MEET THE MBE AND WBE GOALS SET FORTH IN THE CONTRACT, OFFEROR MUST SUBMIT A REQUEST FOR WAIVER FORM (M/WBE 104).

PREPARED BY (Signature): <i>Patricia H. Schumaker</i> DATE: 5/30/2012	TELEPHONE NO.: 734-998-5550 EMAIL ADDRESS: pschumaker@schuco.com FOR M/WBE USE ONLY
NAME AND TITLE OF PREPARER (Print or Type): Patricia H. Schumaker, President SUBMISSION OF THIS FORM CONSTITUTES THE OFFEROR'S ACKNOWLEDGEMENT AND AGREEMENT TO COMPLY WITH THE M/WBE REQUIREMENTS SET FORTH UNDER NYS EXECUTIVE LAW, ARTICLE 15-A, 5 NYCRR PART 143, AND THE ABOVE-REFERENCED SOLICITATION. FAILURE TO SUBMIT COMPLETE AND ACCURATE INFORMATION MAY RESULT IN A FINDING OF NONCOMPLIANCE AND POSSIBLE TERMINATION OF YOUR CONTRACT.	
REVIEWED BY: _____ DATE: _____ UTILIZATION PLAN APPROVED: <input type="checkbox"/> YES <input type="checkbox"/> NO Date: _____ Contract No.: _____ Project No. (if applicable): _____ Contract Award Date: _____ Estimated Date of Completion: _____ Amount Obligated Under the Contract: _____ Description of Work: _____ NOTICE OF DEFICIENCY ISSUED: <input type="checkbox"/> YES <input type="checkbox"/> NO Date: _____ NOTICE OF ACCEPTANCE ISSUED: <input type="checkbox"/> YES <input type="checkbox"/> NO Date: _____	
<p align="center">M/WBE 103 (Revised 11/08)</p>	

**Non-Collusive Bidding Certification
Required by Section 2878 of the Public Authorities Law**

By submission of this bid, bidder and each person signing on behalf of bidder certifies, and in the case of joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his/her knowledge and belief:

[1] The prices in this bid have been arrived at independently, without collusion, consultation, communication, or agreement, for the purposes of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor;

[2] Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and

[3] No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

A BID SHALL NOT BE CONSIDERED FOR AWARD NOR SHALL ANY AWARD BE MADE WHERE [1], [2], [3] ABOVE HAVE NOT BEEN COMPLIED WITH; PROVIDED HOWEVER, THAT IF IN ANY CASE THE BIDDER(S) CANNOT MAKE THE FOREGOING CERTIFICATION, THE BIDDER SHALL SO STATE AND SHALL FURNISH BELOW A SIGNED STATEMENT WHICH SETS FORTH IN DETAIL THE REASONS THEREFORE:

[AFFIX ADDENDUM TO THIS PAGE IF SPACE IS REQUIRED FOR STATEMENT.]

Subscribed to under penalty of perjury under the laws of the State of New York, this
30th day of May, 2012 **as the act and deed of said**
corporation of partnership.

IF BIDDER(S) (ARE) A PARTNERSHIP, COMPLETE THE FOLLOWING:

NAMES OF PARTNERS OR PRINCIPALS	LEGAL RESIDENCE
_____	_____
_____	_____
_____	_____
_____	_____

IF BIDDER(S) (ARE) A CORPORATION, COMPLETE THE FOLLOWING:

NAMES

LEGAL RESIDENCE

Patricia H. Schumaker
President

3101 Walnut Ridge Drive, Ann Arbor, MI 48103

Dennis J. Schumaker
Secretary

3101 Walnut Ridge Drive, Ann Arbor, MI 48103

Patricia H. Schumaker
Treasurer

3101 Walnut Ridge Drive, Ann Arbor, MI 48103

President

Secretary

Treasurer

Identifying Data:

Potential Consultant:

Schumaker & Company, Inc.

Street Address: 3101 Walnut Ridge Drive

City, Town, etc. Ann Arbor, MI 48103

Telephone: (734) 998-5550 **Title:** President

Patricia H. Schumaker
If applicable, Responsible Corporate Officer Name

President
Title

Patricia Schumaker
Signature

Joint or combined bids by companies or firms must be certified on behalf of each participant:

Legal name of person, firm or corporation Legal name of person, firm or corporation

By _____ By _____
(Name) ... (Name)

Title Title

Street Address Street Address

City and State City and State

NONDISCRIMINATION IN EMPLOYMENT IN NORTHERN IRELAND:

MACBRIDE FAIR EMPLOYMENT PRINCIPLES

In accordance with section 165 of the State Finance Law, the bidder, by submission of this bid certifies that it or any individual or legal entity in which the bidder holds a 10% or greater ownership interest, or any individual or legal entity that holds a 10% or greater ownership in the bidder, either: (answer yes or no to one or both of the following, as applicable),

(1) has business operations in Northern Ireland;

Yes___ or No^X__

If yes:

(2) shall take lawful steps in good faith to conduct any business operations that it has in Northern Ireland in accordance with the MacBride Fair Employment Principles relating to nondiscrimination in employment and freedom of workplace opportunity regarding such operations in Northern Ireland, and shall permit independent monitoring of their compliance with such Principles.

Yes___ or No___



Signature

Offerer Disclosure of Prior Non-Responsibility Determinations

Name of Individual or Entity Seeking to Enter into the Procurement Contract: Schumaker & Company, Inc.

Address: 3101 Walnut Ridge Drive, Ann Arbor, MI 48103

Name and Title of Person Submitting this Form: Patricia H. Schumaker

Contract Procurement Number: Matter No. 12-00314

Date: 5/30/2012

1. Has any Governmental Entity made a finding of non-responsibility regarding the individual or entity seeking to enter into the procurement contract in the previous four years? (Please circle):

No Yes

2. If yes, was the basis for the finding of non-responsibility due to a violation of State Finance Law § 139-j? (Please circle):

No Yes

3. Was the basis for the finding of non-responsibility due to the intentional provision of false or incomplete information to a Governmental Entity? (Please circle):

No Yes

4. If yes, please provide details regarding the finding of non-responsibility below.

Governmental Entity: _____

Date of Finding of Non-Responsibility: _____

Basis of Finding of Non-Responsibility: _____

5. Has any Governmental Entity or other governmental agency terminated or withheld a procurement contract with the above-named individual or entity due to the intentional provision of false or incomplete information? (Please circle):

No

Yes

6. If yes, please provide details below.

Governmental Entity: _____

Date of Termination or Withholding of Contract: _____

Basis of Termination or Withholding: _____

Offerer certifies that all information provided to the Long Island Power Authority with respect to State Finance Law § 139-k in complete, true and accurate.

By: *Patricia Schumacher*
Signature

Date: 5/30/2012

CONTINGENT FEE CERTIFICATION

In accordance with section F.2 of Article II of the Long Island Power Authority “Guidelines Regarding the Use, Awarding, Monitoring and Reporting of Procurement Contracts” (the “Guidelines”), Proposer, by submission of this proposal certifies the following with respect to the payment of contingent fees:

- (1) Proposer has not employed or retained and will not employ or retain any individual or entity for the purpose of soliciting or securing any Long Island Power Authority contract or any amendment or modification thereto pursuant to any agreement or understanding for receipt of any form of compensation which in whole or in part is contingent or dependent upon the award of any such contract or any amendment or modification thereto; and
- (2) Proposer will not seek or be paid an additional fee that is contingent or dependent upon the completion of a transaction by the Long Island Power Authority.

FAILURE TO PROVIDE THIS CERTIFICATION WILL BE GROUNDS FOR DISQUALIFICATION IN THE PROCUREMENT PROCESS.

VIOLATION OF EITHER (1) OR (2) OF THIS CERTIFICATION SHALL RESULT IN:

- (i) disqualification of Proposer from the procurement process; and
- (ii) prohibition of the Proposer from being awarded any contract for a period of three years from the commencement of the procurement process.

Certified as of the 30th day of May, 2012.

Schumaker & Company, Inc.
Name of person, firm or corporation

By Patricia H. Schumaker, President
(Name and Title)

A. Consultant Resumes

The following resumes highlight the recent, relevant professional experience of our proposed consultants for this specific assignment. A background and experience summary is provided along with a listing of pertinent assignments in which the respective consultant has gained experience relevant to his or her responsibilities for this assignment. The project team includes professionals with educational backgrounds in accounting, finance, economics, statistics, business management, taxation, law and computers as well as expertise in addressing regulatory issues for electric, gas, telecommunications, water and sewer utilities.

Members of this team have extensive experience providing consulting to regulatory agencies concerning a wide range of issues affecting public utilities. The professionals proposed for this project have worked as consultants on numerous projects for regulatory commission staffs and intervenors, and have provided litigation assistance on behalf of law firms representing utilities and others. Our team includes expert consultants and CPAs who are thoroughly familiar with the issues in utility regulatory consulting engagements. Resumes are organized as follows:

Ms. Patricia H. Schumaker, CMC [®] , PMP [®] , CPA, CGMA, Engagement Manager and Principal Consultant	A-3
Mr. Dennis J. Schumaker, CMC [®] , MCSE, MCSA, Project Manager & Principal Consultant	A-19
Mr. Lee E. Burgess, Principal Consultant	A-37
Mr. Eugene N. Johnson, PE, Senior Technical Consultant	A-53
Ms. Martha J. King, CPA, Senior Consultant.....	A-61
Mr. D. Kerry Laycock, CMC [®] , Principal Consultant	A-69
Mr. Robert L. Rosenkoetter, CPA, Principal Consultant.....	A-81
Ms. Gail E. Stopar, Support Consultant & Analyst	A-93
Ms. Jaye M. Kain, Project Administrator & Analyst.....	A-103

Ms. Patricia H. Schumaker, CPA, CGMA, CMC®, PMP® Engagement Manager and Principal Consultant

Background

Ms. Patricia H. Schumaker has over 30 years of experience in private industry and in consulting for state and local governmental agencies, utilities, telecommunications firms, manufacturing and distribution firms, and service organizations. She possesses considerable experience as *Engagement Manager* and *Project Manager* and has acted as *Lead Consultant* in the areas of organization and management, external relations, quality improvement, accounting and financial management, corporate governance, affiliate relationships and transactions, cost allocations, information technology and systems, human resources, diversity/EEO, customer service, and support services (purchasing, materials management, transportation, safety, legal, risk management, and records management) on numerous management, operations, and technology assessments and performance reviews. Previously, she also held various positions within ADP Network Services, including *Director–Information Services*, *Director–National Accounts*, and *Director–Professional Services*, as well as other managerial, technical, and sales positions. Ms. Schumaker also performed numerous studies for utility, government, manufacturing and distribution, retail, and service clients while an auditor and consultant with Arthur Andersen and Lybrand Ross Bros. & Montgomery. She is one of the founders of Schumaker & Company, Inc., which was founded in 1986.

Education & Certifications

Ms. Schumaker is a *Certified Public Accountant* (CPA) and a *Chartered Global Management Accountant* (CGMA) and holds a BSBA in Accounting from the Ohio State University. In addition, she earned an MBA in Operations Research from the University of Michigan, where she has also completed post-graduate coursework. She also holds other certifications such as *Certified Management Consultant* (CMC®) and *Project Management Professional* (PMP®).

Consulting Expertise

- ◆ Management and operations reviews and assessments
- ◆ Business process re-engineering and quality improvement program development
- ◆ Strategic and operations planning
- ◆ Competitive analyses and customer surveys
- ◆ Performance measurement development
- ◆ User requirements definition and needs assessments
- ◆ Information technology planning, integration, and optimization
- ◆ Project management services
- ◆ Quality assurance services
- ◆ Litigation support

Professional Affiliations

- ◆ Institute of Management Consultants (IMC USA)
- ◆ National Board Member, IMC USA
- ◆ Past President, Past Vice President, and Past Professional Development Chair, IMC USA Michigan Chapter
- ◆ American Institute of Certified Public Accountants (AICPA)
- ◆ Information Technology Member, AICPA
- ◆ Project Management Task Force Member, AICPA
- ◆ Michigan Association of Certified Public Accountants (MACPA)
- ◆ Past Chair, Management Consulting Services Committee, MACPA
- ◆ Past Chair, Specialized Interests Track, MACPA
- ◆ Regional Advisory Committee, MACPA
- ◆ Project Management Institute (PMI), including memberships in the following special interest groups: consulting, government, information technology & telecommunications, risk management, and utility industry SIGs
- ◆ Past Chapter President & Board Member, Institute of Management Accountants (IMA)
- ◆ Capital Quality Initiative
- ◆ Computer Information Systems Advisory Committee, Washtenaw Community College

Presentations & Articles

- ◆ Managing Consulting Projects, MACPA, November 2001
- ◆ Managing Consulting Projects, MACPA, August 2001

- ◆ Managing Consulting Projects, MACPA, October 2000
- ◆ Incentive Compensation, Does It Work?, MACPA, May 1994

State Government Experience

She has provided management, operations, and technology reviews and assessment, business process re-engineering and quality improvement programs, project management services, and quality assurance services for numerous state government agencies.

- | | | | | | |
|--------------|------------|-----------------|--------------|----------------|--------------|
| ◆ Arizona | ◆ Illinois | ◆ Maine | ◆ Nebraska | ◆ N. Dakota | ◆ Tennessee |
| ◆ Arkansas | ◆ Indiana | ◆ Massachusetts | ◆ Nevada | ◆ Ohio | ◆ Texas |
| ◆ California | ◆ Iowa | ◆ Michigan | ◆ New Mexico | ◆ Oregon | ◆ Utah |
| ◆ Colorado | ◆ Kansas | ◆ Minnesota | ◆ New Jersey | ◆ Pennsylvania | ◆ Washington |
| ◆ Idaho | ◆ Kentucky | ◆ Montana | ◆ New York | ◆ S. Dakota | ◆ Wyoming |

In Michigan alone, she has conducted assignments for the following organizations:

- | | |
|--|---|
| ◆ Michigan Commission for the Blind | ◆ Michigan Department of Management & Budget |
| ◆ Michigan Department of Agriculture | ◆ Michigan Department of State Police |
| ◆ Michigan Department of Community Health | ◆ Michigan Department of Treasury |
| ◆ Michigan Department of Consumer & Industry Services | ◆ Michigan Family Independence Agency |
| ◆ Michigan Department of Corrections | ◆ Michigan Office of Financial & Insurance Regulation |
| ◆ Michigan Department of Environmental Quality, Air Quality Div. | ◆ Michigan State Hospital Finance Authority |
| ◆ Michigan Department of Labor | |

Local Government Experience

She has provided management, operations, and technology reviews and assessment, business process re-engineering and quality improvement programs, project management services, and quality assurance services for numerous local government agencies.

- | | | |
|---|-----------------------------|---------------------------------------|
| ◆ City of Ann Arbor (MI) | ◆ City of Niles (MI) | ◆ Town of Hilton Head Island (SC) |
| ◆ City of Ann Arbor Housing Commission (MI) | ◆ City of Philadelphia (PA) | ◆ Town of Middleborough (MA) |
| ◆ City of Dearborn (MI) | ◆ City of Sturgis (MI) | ◆ Wayne County Airport Authority (MI) |
| ◆ City of Detroit (MI) | | |

Utility Commission Experience

Additionally, Ms. Schumaker has performed comprehensive and/or focused performance reviews for regulatory commissions and agencies, including:

- | | | |
|--|--|---|
| Arizona Corporation Commission | Massachusetts Department of Public Utilities | Oregon Public Utilities Commission |
| Arkansas Public Service Commission | Michigan Public Service Commission | Pennsylvania Public Utility Commission |
| California Public Utilities Commission | Minnesota Public Utilities Commission | Public Utility Commission of Ohio |
| Colorado Public Utilities Commission | Montana Public Service Commission | Public Utility Commission of Texas |
| Idaho Public Utilities Commission | Nebraska Public Service Commission | Public Service Commission of Utah |
| Illinois Commerce Commission | Nevada Public Service Commission | South Carolina Office of Regulatory Staff |
| Indiana Utility Regulatory Commission | New Mexico Public Regulation Commission | South Dakota Public Utilities Commission |
| Iowa Utilities Board | New Jersey Board of Public Utilities | Tennessee Regulatory Authority |
| Kansas Corporation Commission | New York Public Service Commission | WA Utilities & Transportation Commission |
| Kentucky Public Service Commission | North Dakota Public Service Commission | Wyoming Public Service Commission |
| Maine Public Utilities Commission | | |

She has also acted as *Expert Witness* involving regulatory commissions in Illinois, Maine, Pennsylvania, and Tennessee.

Electric, Gas, and Water/Wastewater Utility Company Experience

Ms. Schumaker's specific experience in the electric, gas, and water/wastewater industries includes assignments at over 50 different organizations.

Electric Utilities

AEP/Indiana Michigan Power (MI)	Kingsport Power Company (AEP)
Alpena Power Company (MI)	Jersey Central Power & Light
Central Maine Power Company	Middleborough (MA) Gas & Electric Department
City of Niles (MI) Utilities Department	Nova Scotia Power Incorporated
City of Sturgis (MI) Electric Department	PECO Energy Company
<i>Consumers Power Company (Consumers Energy)</i>	Pennsylvania Power & Light Company
Dayton Power & Light	Public Service Company of New Mexico
Detroit Edison	Union Light Heat and Power Company
Duke Energy Ohio	Upper Peninsula Power Company (MI)
El Paso Electric Company	West Texas Utilities Company (Central & Southwest Corp.)
Entergy	

Gas Utilities

Elizabethtown Gas Company (NUI Corporation)	Pennsylvania Gas & Water Company (PG Energy)
Equitable Gas Company	Peoples Natural Gas Company
Middleborough (MA) Gas & Electric Department	Philadelphia Gas Works
New Jersey Natural Gas Company (NJ Resources Corp.)	Southern California Gas Company
Pacific Gas & Electric Company	South Jersey Gas Company (South Jersey Industries Corporation)
PECO Energy Company	Western Kentucky Gas Company (Atmos)

Water/Wastewater Utilities

City of Niles (MI) Utilities Department	Philadelphia Suburban Water Co. (Philadelphia Suburban Corp.)
Kentucky-American Water Company (American Water)	Tennessee-American Water Company
Pennsylvania-American Water Co. (American Water Works)	United Water New Jersey (United Water Resources)
Pennsylvania Gas & Water Company (PG Energy)	Water Services Corporation of South Carolina

Consulting Experience

Project Management Experience

Ms. Schumaker is a *Project Management Professional* (PMP®) and has participated as *Engagement Manager* or *Project Manager* on numerous consulting projects for state and local governmental agencies and directly for companies, as well as providing project management services. She is a member of the Project Management Institute and has attended numerous project management training courses. She is also a member of the Midwestern Microsoft Project Users Group. Project management software systems used include APECS, Workbench, Microsoft Project, and Microsoft Team Manager. Most recently, she has used the following specific project management tools on consulting assignments:

- ◆ Microsoft Project for planning, scheduling, resource loading, reporting, and monitoring project progress.
- ◆ @Risk for Project for dealing with the uncertainty associated with a large systems development project.
- ◆ Business Engine for developing enterprise wide resource resources loading and utilization analyses.

Over 30 years of consulting experience, Ms. Schumaker has been the *Project Manager* for over 100 different assignments, including management, operations, and technology reviews; business process reengineering and process outsourcing improvement projects, and technology implementation projects. Over 50 of these involved the review and implementation of project management or quality assurance techniques to a business or government entity's internal operations.

Utility Management & Operations Audit Experience

Ms. Schumaker has been a *Lead* or *Technical Consultant* on over 50 management and operations reviews and assessments over the last 15 years and testified before three regulatory commissions. Sustaining or improving the reliability of aging assets, while minimizing operational, maintenance, and capital costs is vital to every utility company. Also, managing risks (operational, safety, environmental, etc.) and maximizing worker productivity remain key aspects of any business. To maintain a solid return on investment from year to year, utility operations must design and implement a plan for managing their assets.

Ms. Schumaker's management audit work has focused on management and operations assessments and performance reviews; business restructuring, business process re-engineering, and process analysis teams; affiliated transactions and cost allocations; customer satisfaction and needs assessments; performance measurement development; and information systems and technology.

Utility Industry Restructuring Experience

Ms. Schumaker has conducted restructuring studies, compliance audits, and code of conduct audits of electric and gas utilities across the country. Their purpose was to ensure that incumbent utilities or their related competitive business segments did not have an unfair competitive advantage over other, non-affiliated purveyors of competitive services. They also served as a means of evaluating and reviewing the allocation of costs between competitive and non-competitive services. She has offered expert opinion, based on appropriate methodology, as to whether strict separation and allocation of revenues, costs, assets, risks, and functions existed between the utilities electric and/or gas distribution operations and its related competitive business segments. In many cases the audits determined (1) whether cross subsidization existed between utility and non-utility segments within a public utility or holding company; (2) whether the separation of utility and non-utility organizations was reasonable based on the state commission's affiliate relation and fair competition standards; (3) what the effect on ratepayers was regarding the use of utility assets in the provision of non-safety-related competitive services; (4) what the effect on utility workers was; (5) what the effect of utility practices was on the market for such services; and (6) compliance with legislation. She has provided opinion on whether any other service(s) offered by utilities was/were competitive.

Fuels Management Experience

Ms. Schumaker has over 30 years of experience in the electric and gas utility industry, which has included fuel procurement and fuel adjustment mechanisms in numerous jurisdictions. Ms. Schumaker understands not only the management and technical issues involving fuels management but also the procedural and administrative issues involved in performing such a review on behalf of a regulatory agency.

Duke Energy Ohio
El Paso Electric Company
Nova Scotia Power Incorporated

Public Service Company of New Mexico
Pacific Gas & Electric Company
Various AEP and FirstEnergy Ohio utilities

Financial Management Experience

Patricia Schumaker, CPA, CGMA, has performed as *Lead Consultant* in this task area and analyzed, documented, and verified, through findings based on identifiable and measurable information and data financial management reviews. She has performed comprehensive reviews of the direct and indirect effects of borrowings and investments; short-term and long-term financial planning and analysis, budgeting, cash management, general accounting, property records, and tax management policies, procedures, and practices. And, thereby assessed the degree to which historical and projected activities have resulted in best practices. Her experience includes numerous studies for utility, government, manufacturing and distribution, retail, and service clients while an auditor and consultant with Arthur Andersen and Lybrand Ross Bros. & Montgomery.

Ann Arbor Housing Commission	New Jersey Natural Gas Company/New Jersey Resources Corp.
ALLTEL Pennsylvania	Pacific Gas & Electric Company
Cincinnati Gas & Electric Co./Union Light, Heat & Power Co.	PECO Energy/Exelon
City of Niles (MI) Utilities Department	Pennsylvania Power & Light Company
City of Sturgis Electric Department	Pennsylvania-American Water Company/American Water
Commonwealth Telephone Company	Philadelphia Gas Works
Dayton Power & Light Company	Philadelphia Suburban Water Company/PA Enterprises
Duke Energy Ohio	Public Service Company of New Mexico
Elizabethtown Gas Company/NUI Corporation	Southern California Gas Company
El Paso Electric Company	Tennessee-American Water Company
Equitable Gas Company/EQT	Town of Hilton Head Island
Illinois Bell Telephone Company/Ameritech	United Water New Jersey
Jersey Central Power & Light	West Texas Utilities Company/Central and Southwest Corp.
Kentucky-American Water Co./American Water Works Corp.	Western Kentucky Gas Company/ATMOS
Kingsport Power Company/AEP	Various State of Michigan organizations
New England Telephone Company/NYNEX	

Affiliate Interests and Cost Allocations Experience

Patricia Schumaker, CPA, CGMA, has over 30 years of diverse management consulting experience. She has examined affiliate relationship and cost allocation issues at various publicly-owned utilities and public power municipalities and agencies. She has worked both for companies in assisting in their compliance with affiliate relationship rules and regulations and with regulatory commissions in determining compliance of companies with affiliate relationship rules and regulations. The scope of her experience includes affiliate legal entity organization structures, management organization structures, management models and incentive compensation programs, cost accounting and allocation, and codes of conduct. Audits have included both a holding company's and a utility's compliance with all conditions imposed by a Commission concerning affiliate company transactions, including the propriety of the transfer pricing of goods and services between and/or among the utility and its affiliates.

An affiliate interest is defined as a business entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with a regulated utility. Control is defined as the power to dictate or influence the policy of an entity, whether through the ownership of voting securities, by contract, or otherwise. Her audit experience includes the full spectrum of functional reviews of gas, electric, water/wastewater, and telephone utilities.

ALLTEL Pennsylvania	Pennsylvania Gas and Water Company
Cincinnati Gas & Electric/Union Light, Heat & Power	Pennsylvania-American Water Company/American Water
Commonwealth Telephone Company Ameritech	Philadelphia Suburban Water Company/PA Enterprises
Elizabethtown Gas Company (NUI Corporation)	South Jersey Gas Company/South Jersey Industries
Equitable Gas Company/EQT	Tennessee-American Water Company/American Water
Illinois Bell Telephone Company/Ameritech	U S WEST Advanced Technologies, Inc.
Jersey Central Power & Light/FirstEnergy	U S WEST, Inc.
Kentucky-American Water Co./American Water	United Water New Jersey/United Water
Kingsport Power Company/AEP	Water Services Corporation of South Carolina
New England Telephone Company/NYNEX	West Texas Utilities Company/Central and Southwest Corp.
New Jersey Natural Gas Company/New Jersey Resources	Western Kentucky Gas Company/ATMOS
PECO Energy Company/Exelon	

Customer Services and Call Center Operations Experience

Patricia Schumaker has conducted comprehensive reviews of all critical contact center operations and practices to identify opportunities to improve service performance, increase productivity, and manage costs more effectively. Achieving an effective balance of any contact center's complex environment where customers demand responsive, consistent service through multiple channels at the times of their choosing, senior management expects a cost-effective operation, and employees want a pleasant work environment with opportunities to advance is both difficult to manage and can be very expensive. Working to understand the utility's business, its customers, its processes, and how the utility currently operate, Ms. Schumaker uses proven methods and tailors recommendations to meet a client's needs for maximizing effectiveness, leveraging opportunities for improvement, and introducing industry best practices wherever appropriate.

Schumaker & Company's full range of customer relations consulting services provides thorough analyses of a customer's touch points beyond just the phone calls and includes analyzing call center operations, including customer accounting and billing practices, to identify the roadblocks to effective customer service. Her review is customized to each client and typically addresses some or all of the following critical issues:

- ◆ Review strategy and vision
- ◆ Gather contact center performance data
- ◆ Assess current metrics
- ◆ Review performance history
- ◆ Conduct analysis of customer interactions
- ◆ Interview contact center personnel
- ◆ Evaluate organization and governance
- ◆ Sample and review customer satisfaction feedback
- ◆ Evaluate key processes
- ◆ Identify points of pain

The customer service function whose success is measured in volume and not customer satisfaction is destined for failure. Proactive customer care results in customer loyalty.

Central Maine Power Company
Cincinnati Gas & Electric Company/Union Light, Heat & Power
Philadelphia Gas Works
SBC Ameritech Indiana

Verizon New York
Western Kentucky Gas Company/ATMOS
Tennessee-American Water Company
Verizon New York

External Relations Experience

Patricia Schumaker has reviewed corporate policies, procedures, and practices to establish and maintain good relations with local, national and, where appropriate, international sources, the private/public sector, and other relevant stakeholders to evaluate corporate image and multi-stakeholder support for operations and activities.

ALLTEL Pennsylvania
Central Maine Power Company
City of Niles (MI) Utilities Department
Commonwealth Telephone Company

Equitable Gas Company/EQT
Pennsylvania-American Water Company/American Water
Philadelphia Gas Works
Tennessee-American Water Company/American Water

Facilities and Property Management Experience

Consulting assignments in this task area have found Patricia Schumaker interviewing relevant staff and management involved with proactively and aggressively planning, maintaining, operating and managing all owned and leased properties for compliance with a safe, accessible, and effective manner of business operation.

Equitable Gas Company/EQT
Jersey Central Power & Light
Pennsylvania-American Water Company/American Water

PECO Energy Company/Exelon
Philadelphia Gas Works

Procurement and Materials Management Experience

Patricia Schumaker has developed recommendations pertaining to implementation of improved computer systems for procurement management, materials management, and stores management functions, and recommended enhancements to work estimating and monitoring systems.

She has also focused on the effective monitoring and control of inventory levels through the implementation and utilization of integrated purchasing and inventory control software packages, thereby enhancing the client's ability to take economic advantage of its volume purchasing power by more effective centralization of the purchasing process and management of inventory levels.

Equitable Gas Company/EQT

Central Maine Power Company

Kentucky-American Water Company/American Water Works Corp.

Kingsport Power Company/AEP

Pennsylvania-American Water Company/American Water

West Texas Utilities Company

Information Technology and Systems Experience

With advances in the field of information technology, utilities have become increasingly dependent on their information systems to support and perform the business processes of the company. As such, the adequacy of the installed systems to perform the required tasks is critical to the effectiveness and efficiency of the utility's operations. Additionally, utilities spend large amounts of money each year to upgrade, maintain, and operate their internal IT systems. It is important that this money is well spent and is producing the required results at an economic level of expense. Among other issues, Ms. Schumaker has evaluated the information technology (IT) function regarding its role in supporting operations and providing adequate and timely management information and data, assessed short- and long-range planning processes and methods by which the IT organization evaluates performance against plan to determine whether these plans support overall company goals and objectives, and reviewed policies and procedures by which IT services (including hardware, software, communication lines, office systems, and technical support) are allocated to users.

Ann Arbor Housing Commission

ALLTEL Pennsylvania

Cincinnati Gas & Electric Company/Union Light Heat & Power

City of Niles (MI) Utilities Department

Commonwealth Telephone Company

Equitable Gas Company/EQT

Kentucky-American Water Company/American Water Works Corp.

Kingsport Power Company/AEP

PECO Energy Company/Exelon

Pennsylvania-American Water Company/American Water

Pennsylvania Gas and Water Company

Pennsylvania Power & Light Company

Philadelphia Gas Works

Philadelphia Suburban Water Company/PA Enterprises

Wayne County Airport Authority

West Texas Utilities Company

Western Kentucky Gas Company/ATMOS

Legal Services Experience

Legal services functions are certainly critical to efficient operation of the utility. While they must be conducted in an effective manner, they must also be performed without incurring more expense than is required to achieve the appropriate level of services. Patricia Schumaker's principal objective in evaluating legal services is to verify that the associated activities are being conducted in an effective and efficient manner that functions performed support the overall company strategic goals, and that established management systems/controls provide management with an adequate ability to ensure appropriate levels of performance. The ultimate objective is the identification of cost-effective improvements in the management and operations that will result in more cost-effective operation and/or better service.

ALLTEL Pennsylvania

Commonwealth Telephone Company

Equitable Gas Company/EQT

Jersey Central Power & Light/FirstEnergy

Philadelphia Gas Works

PECO Energy Company/Exelon

Risk Management Experience

Risk management is attempting to identify and then manage threats that could severely impact or bring down the organization. Generally, this involves reviewing operations of the organization, identifying potential threats to the organization and the likelihood of their occurrence, and then taking appropriate actions to address the most likely threats. Patricia Schumaker has performed several comprehensive, focused assessments of potential risks to organizations. These focused assessments are carefully planned, documented, and methodically carried out. Every organization must have up-to-date policies which guide the relationships between staff and management. Therefore, personnel policies must be reviewed by an outside advisor, like Ms. Schumaker, who is proficient on employee-related laws and regulations. Sound financial and asset controls help minimize theft, fraud, and waste. Careful strategic planning and effective supervision helps ensure organizational resources are closely aligned to accomplishing the organization's mission, and that staff and volunteers are treated fairly and comply with rules and regulations.

Equitable Gas Company/EQT
Jersey Central Power & Light
Philadelphia Gas Works

Pennsylvania-American Water Company/American Water
PECO Energy Company/Exelon
Various State of Michigan organizations

Operational Design and Performance Experience

To align the performance and capability of a business to the market and establish competitive positioning is often a challenge. Ms. Schumaker has helped look at the whole of an organization - evaluating its effectiveness using established and recognized methods. She has also looked at the motivation of the people and the behaviors behind them, the drivers, and what of these are positive and contributory.

Ann Arbor Housing Commission
ALLTEL Pennsylvania
Cincinnati Gas & Electric Company/Union Light, Heat & Power
City of Dearborn (MI)
City of Detroit (MI)
City of Niles (MI)
City of Sturgis (MI)
Commonwealth Telephone Company
Elizabethtown Gas Company/NUI Corporation
Equitable Gas Company/EQT
Illinois Bell Telephone Company/Ameritech
Kentucky-American Water Company/American Water
Kingsport Power Company/AEP
New England Telephone Company/NYNEX
New Jersey Natural Gas Company/New Jersey Resources Corp.

Pacific Gas & Electric Company
PECO Energy/Exelon
Pennsylvania Power & Light Company
Pennsylvania-American Water Company/American Water
Philadelphia Gas Works
Philadelphia Suburban Water Company/PA Enterprises
Southern California Gas Company
Tennessee-American Water Company
Town of Hilton Head Island
United Water New Jersey
Wayne County Airport Authority
West Texas Utilities Company/Central and Southwest Corp.
Western Kentucky Gas Company/ATMOS
Various State of Michigan organizations

Support Services Experience

Patricia H. Schumaker has performed investigations and evaluations on current practices in those operational areas related to support functions for government agencies, utilities, telecommunications firms, manufacturing and distribution firms, and service organizations. She has considerable experience as *Project Manager* and has acted as *Lead Consultant* in the area of support services (purchasing, materials management, transportation, safety, legal, risk management, information technology, and records management) on numerous management and operations assessments and performance reviews. Specifically she has performed reviews of the entire support services function or selected components thereof on numerous management audits.

ALLTEL Pennsylvania
Cincinnati Gas & Electric Company/Union Light, Heat & Power
Commonwealth Telephone Company
Jersey Central Power & Light/FirstEnergy
Kingsport Power Company/AEP
PECO Energy Company/Exelon
Pennsylvania Gas & Water Company
Pennsylvania Power & Light Company

Pennsylvania-American Water Company/American Water
Philadelphia Gas Works
Philadelphia Suburban Water Company/PA Enterprises
Southern California Gas Company
United Water New Jersey/Untied Water
West Texas Utilities Company/Central & Southwest
Western Kentucky Gas Company/ATMOS
Various State of Michigan organizations

Records Management Experience

Ms. Schumaker has assisted clients in formulating a records management plan for all documents that will, over time, significantly reduce the volume of paper being stored. During audits/reviews, she has helped government agencies recognize where they do or don't capture, control, archive, access and manage critical documents. Local governments are required to retain ownership and ensure the preservation of their permanent records; whereas state agencies must transfer to the state archives the legal ownership and custody of their archival records when they are no longer needed onsite. In government, historical records are those that are designated as 'permanent' in a records retention and disposition schedule. They are also materials you decide to keep beyond the legal retention period because they have continuing research value. Ms. Schumaker has assisted government agencies in their appraisal of these records.

The most effective way to know what records an organization has is to conduct a comprehensive inventory, making sure to include records in electronic systems and in all locations. By focusing first on finding out where the risks are and what to consider as the highest records management priorities, Ms. Schumaker compares current processes in place against best practice profiles. Information is gathered about the business, operations, current records management policies and

procedures, technology infrastructure, and legal profile. Finally she prepares and presents a report that identifies what is already in place that can be leveraged and what is needed, thereby integrating the right strategy, policies and procedures, retention schedule, technology, and education in accord with the international records management standard, ISO 15489.

Jersey Central Power & Light/FirstEnergy

United Water New Jersey/United Water

Quality Improvement Experience

Quality improvement is a formal approach to the analysis of performance and systematic efforts to improve it. In industry, quality efforts focus on topics like product failures or work-related injuries. In administration, one can think of increasing efficiency or reducing re-work. In service industries, customer satisfaction is often the primary measure. Ms. Schumaker has addressed many quality issues and established key indicators during audits as a way to signify best practices or high quality performance that should be expected.

ALLTEL Pennsylvania
Cincinnati Gas & Electric Company/Union Light, Heat & Power
City of Niles (MI) Utilities Department
City of Sturgis Electric Department
Commonwealth Telephone Company
Elizabethtown Gas Company/NUI Corporation
Equitable Gas Company/EQT
Illinois Bell Telephone Company/Ameritech
Kentucky-American Water Company/American Water Works Corp.
Kingsport Power Company/AEP
New England Telephone Company/NYNEX
New Jersey Natural Gas Company/New Jersey Resources Corp.
Pacific Gas & Electric Company

PECO Energy Company/Exelon
Pennsylvania Power & Light Company
Pennsylvania-American Water Company/American Water
Philadelphia Gas Works
Philadelphia Suburban Water Company/PA Enterprises
Southern California Gas Company
Tennessee-American Water Company
Town of Hilton Head Island
United Water New Jersey
West Texas Utilities Company/Central and Southwest Corp.
Western Kentucky Gas Company/ATMOS
Various State of Michigan organizations

Assignment Experience

The following pages contain Ms. Schumaker's relevant client list.

Electric Utility Assignments

Nova Scotia Power Incorporated

Lead Executive Consultant

- ◆ Financial accounting and reporting
- ◆ Examination of access control for coal inventory

Assisted Nova Scotia Power Incorporated (NSPI) in undertaking an audit to examine the solid fuel inventory management function and provide meaningful recommendations for improvement. The review addressed adherence to good utility practice and consistency with the policies and procedures governing fuel management as described in the NSPI Fuel Manual. The scope of the audit included testing the assertions of existence and valuation and an examination of access control for NSPI's coal inventory. The process audited spanned the receipt of the physical inventory through to financial reporting, with a particular focus on adjustments and/or discrepancies between the physical inventory and the inventory records.

Michigan Public Service Commission

Project Lead & Senior Consultant

- ◆ Public Act 286 Section 11 verification involving rate cases
- ◆ Multiple electric company reviews

Assisted the Regulated Energy Division of the Michigan Public Service Commission by verifying that the requirements of Section 11, Public Act No. 286 of 2008 are being satisfied beginning with rate case orders issued after January 1, 2009 for each electric utility in the state, including Detroit Edison, Consumers Energy, Upper Peninsula Power Company, Wisconsin Electric Power Company, Alpena Power Company, and Indiana Michigan Power. Regulated energy utilities file rate cases with the Commission for approval. The Commission issues an order after reviewing the testimony and exhibits of the utility, interveners and the Commission staff. Subsection (1) of Section 11 of PA 286 requires the Commission to phase in electric rates equal to the cost of providing service to each customer class over a period of five years from the effective date of this act unless an exception is met. Therefore, for each regulated electric utility with more than one million retail customers (Consumers Energy and Detroit Edison), the MPSC is phasing in electric rates equal to the cost of providing service to each customer class before October 2013. For each regulated electric utility with less than one million retail customers (all others in Michigan), as mentioned in Subsection (2) as an exception, the phase-in period for cost-of-service rates can exceed five years.

El Paso Electric Company

Executive Consultant I

- ◆ Fuel clause computations
- ◆ Fuel clause related policies, procedures, rules, cost allocations, and manuals

Assisted the New Mexico Public Regulation Commission (NMPRC) staff in a prudence review and audit of the fuel and purchased power cost adjustment clause (fuel clause) and related documentation of the electric business operations of El Paso Electric Company (EPE), specifically to provide professional auditing and prudence review services of EPE's fuel and purchased power costs, fuel clause filings and related documentation for the period of January 1, 2010 through December 31, 2010. This review investigated whether EPE's calculation of the fuel clause was accurate and the costs included in the fuel clause included only allowed costs and EPE's current accounting and internal control policies, management practices, and operational procedures, as they pertain to EPE's administration of the fuel clause, were effective and met related requirements.

Dayton Power & Light Company

Executive Consultant I

- ◆ Finance and accounting policies, procedures, and practices
- ◆ Fuel rider calculation methodologies
- ◆ PJM charges analysis
- ◆ Compliance audit/sampling

Provided fuel cost recovery rider audit co-sourcing assistance to Dayton Power and Light Company (DP&L) to prepare DP&L for its annual review and audit to take place in the first quarter of 2011 for calendar year 2010. Items covered in the scope of work included fuel prices, allocation between wholesale and retail, sharing of gains and losses, coal handling costs, environmental compliance, PJM-related charges, power plant performance, and utility industry perspective.

Jersey Central Power & Light

Engagement Manager & Executive Consultant I

- ◆ Affiliate relationships and affiliate cost allocation methodologies
- ◆ Finance and cash management
- ◆ Accounting and property records
- ◆ Cash management
- ◆ Risk management
- ◆ Records management
- ◆ Information technology
- ◆ Recommendations and review of previous analysis

Assisted the New Jersey Board of Public Utilities in an audit of the affiliated transactions between Jersey Central Power and Light (JCP&L) and its affiliates, and a comprehensive management audit of JCP&L. Task areas included an examination of affiliate relationships and cost allocation methodologies, executive management and corporate governance, organization structure, human resources, strategic planning, finance, accounting and property records, cash management, procurement and purchasing of energy, distribution and operation management, extensions and upgrades to provide regulated services, clean energy, market conditions, contractor performance, customer service, external relations, support services, and a review of actions taken by JCP&L regarding prior audits. As part of the audit, Schumaker & Company reviewed and assessed affiliate cost allocation methodologies to determine accounting and allocation procedures for separating the costs of inter-company transactions. Analysis determined if current accounting and allocation procedures were equitable, fair, and did not favor certain affiliates over JCP&L and its ratepayers. Additionally, examination assessed the electric generation policies, distribution policies, and assignment strategies of JCP&L and its affiliates.

Duke Energy Ohio

Executive Consultant I

- ◆ Fuel clause computations
- ◆ Fuel clause related policies, procedures, and rules
- ◆ Midwest ISO charges analysis

Assisted the Public Utilities Commission of Ohio (PUCO) staff in a management/performance and financial audit of the fuel and purchased power and system reliability tracker riders of Duke Energy Ohio, Inc. Specifically, conducted an audit of the company's fuel costs (including any renewable energy costs) plus an audit of system reliability costs. This audit addressed the management/performance and financial aspects of the recovery mechanism. It consisted of a three-year audit cycle (2009-2011) with a complete and thorough audit being conducted in each year of the audit cycle. The initial audit included the actual cost for Rider PTC-FPP and SRT for the months January through December 2009.

Public Service Company of New Mexico

Executive Consultant I

- ◆ Fuel clause computations
- ◆ Fuel clause related policies, procedures, and rules

Assisted the New Mexico Public Regulation Commission (NMPRC) staff in a prudence review and audit of the fuel and purchased power cost adjustment clause (fuel clause) and related documentation of the electric business operations of Public Service Company of New Mexico (PNM). In specific, to provide professional auditing and prudence review services of PNM's fuel and purchased power costs, fuel clause filings and related documentation for the period of June 1, 2008 through June 30, 2009. This review provided documented evidence on the following:

- ◆ PNM's calculation of the fuel clause is accurate and the costs included in the fuel clause include only allowed costs
- ◆ PNM's current accounting and internal control policies, management practices, and operational procedures as they pertain to PNM's administration of the fuel clause are effective and meet related requirements

PECO Energy Company

Engagement Manager & Lead Consultant

- ◆ Project planning and scheduling
- ◆ Financial management
- ◆ Corporate governance
- ◆ Risk management
- ◆ Legal services
- ◆ Facilities management
- ◆ Information technology
- ◆ Medicare Part D program
- ◆ Diversity/EEO
- ◆ Affiliate relationships/cost allocation

Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including both electric and gas operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Kingsport Power Company*Lead Consultant*

- ◆ Financial management
- ◆ Affiliate relationships & transactions
- ◆ Allocation of fees
- ◆ Cost allocation
- ◆ Information technology

Performed a comprehensive management and operations review in which she focused on various administrative and operating support services performed by the company's Tennessee operations and its affiliates, Appalachian Power Company (in Virginia) and American Electric Power Service Corporation (in Ohio).

Town of Middleborough*Senior Consultant*

- ◆ Strategic planning
- ◆ Goals and objectives
- ◆ Competitive assessment/benchmarking
- ◆ Management and operations review
- ◆ Communication with utility board

Performed a competitive assessment of this municipal gas and electric department for the town of Middleborough, including a management review of all functional areas and benchmarking of major performance indicators in relation to other Massachusetts municipalities and to the best practices of other public and investor-owned utilities. The project resulted in an ongoing assignment with the Board of Commissioners to develop and implement a strategic plan, and develop and implement an information technology (IT) plan. The project included an all-day strategic planning session with the Board of Commissioners and City management personnel in attendance. The current situation of the municipality (strengths, weaknesses, opportunities, and threats) was developed and specific strategies, goals, and objectives identified and agreed to by the Commissioners and City management for addressing these items. Six months after the implementation of the strategic plan, a follow-up planning session was conducted to update the plan. The IT plan resulted in the standardization of computer hardware and software, the implementation of a wide area network (WAN) and an Internet presence by the municipality.

Pennsylvania Power & Light Company*Lead Consultant*

- ◆ Financial management
- ◆ Corporate-wide technology
- ◆ Management information systems

Performed a stratified management audit involving a review of financial management and information technology. Presented 18 major recommendations addressing how corporate-wide technology impacts PP&L's ability to operate efficiently in a changing environment.

Central Maine Power Company*Engagement Manager, Lead Consultant, and Expert Witness*

- ◆ Organizational structure/management and staffing
- ◆ Executive compensation
- ◆ Customer service operations
- ◆ Management efficiency and cost control

Performed a focused management and operations review in which she investigated many of the financial management and support services functions, including work management and materials management. As *Engagement Manager*, she was actively involved in all aspects of the project.

Union Light, Heat and Power Company*Lead Consultant*

- ◆ Financial management
- ◆ Customer services (billing and accounting)
- ◆ Human resources
- ◆ Support services/IT
- ◆ Affiliate relationships and transactions
- ◆ Allocation of fees

Performed a management and operations review in which she investigated the areas of affiliated relationships, corporate finance, financial requirements planning and economic analysis, cash management, management accounting, taxes, budgeting management and control, internal auditing, rates, customer services (customer billing and accounting), human resources, support services, and management information systems.

<p>1935 Public Utility Holding Company <i>Engagement Manager & Lead Consultant</i></p> <ul style="list-style-type: none">◆ Affiliate relationships and transactions◆ Allocation of fees	<p>Performed a review of charges associated with the services provided by a services company to its affiliates. The review was to determine whether the services were reasonable, necessary, and non-duplicative and to assess if charges were calculated in compliance with appropriate allocation formulae.</p>
<p>Entergy/Arkansas Public Service Commission <i>Engagement Manager & Lead Consultant</i></p> <ul style="list-style-type: none">◆ Monitoring and control of a management and operations review◆ Training to Commission staff regarding how to proceed with the monitoring and control of a management and operations review	<p>Presented a written and oral review of the proposal prepared by the consultant team chosen by APSC to perform a review of Entergy. This review was followed by a written and oral review of the consultant team's detailed work plan. We also assisted the APSC in managing the audit, the consultant project team, and their work products.</p>
<p>Central Maine Power Company <i>Engagement Manager, Lead Consultant, and Expert Witness</i></p> <ul style="list-style-type: none">◆ Project management methodologies	<p>Performed a focused management and operations review in which she investigated the project management methodologies, the project approach, and the activities undertaken by CMP during implementation of its customer service system.</p>
<p>City of Niles (Michigan) Utilities Department <i>Technical Adviser</i></p> <ul style="list-style-type: none">◆ Executive management and staffing◆ Accounting and finance◆ Human resources◆ Support/management information systems	<p>Conducted a management and operations review for the electric, water, and wastewater functions.</p>
<p>West Texas Utilities Company <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Financial management◆ Support services◆ Management information systems◆ Affiliate relationships and transactions◆ Allocation of fees	<p>Performed a management and operations review in which she investigated affiliated relationships, corporate finance, financial requirements planning and economic analysis, cash management, accounting, taxes, budgeting management and control, internal auditing, rates, support services, and management information systems.</p>

Gas Utility Assignments

Equitable Gas Company*Engagement Manager & Executive Consultant I*

- ◆ Project planning and scheduling
- ◆ Financial management
- ◆ Risk management
- ◆ Legal services
- ◆ Information technology and systems
- ◆ Data and statistics
- ◆ Affiliated interests
- ◆ Diversity and EEO

Performed a stratified management and operations audit of Equitable Gas Company (EGC), a subsidiary of EQT Corporation, and its relationship with its affiliates. The primary focus of this management and operations audit are the business components of EGC that are still subject to regulation by the Pennsylvania Public Utility Commission, specifically EGC service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. The objectives include the determination of what improvements, if any, can be accomplished in the management and operations of EGC pursuant to Section 522(b) of the Public Utility Code 66 Pa. C.S. §522(b). Specifically, Schumaker & Company looked for economies, efficiencies, or improvements which benefit EGC and its ratepayers. In doing so, Schumaker & Company identifies which, if any, economically practical opportunities for cost saving measures and/or better service can be instituted.

Philadelphia Gas Works*Engagement Manager & Executive Consultant I*

- ◆ Project planning and scheduling
- ◆ Financial management
- ◆ Corporate governance & Sarbanes-Oxley Act of 2002
- ◆ Diversity/EEO
- ◆ Risk management
- ◆ Legal
- ◆ Information technology

Performed a stratified management and operations audit of Philadelphia Gas Works (PGW). The primary focus of this management and operations audit is to review those PGW business components subject to regulation by the PaPUC, specifically PGW service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of, efficiencies, or improvements which benefit PGW and its ratepayers. In doing so, Schumaker & Company identified which, if any, economically practical opportunities for cost saving measures can be instituted.

PECO Energy Company*Engagement Manager & Lead Consultant*

- ◆ Project planning and scheduling
- ◆ Financial management
- ◆ Corporate governance
- ◆ Risk management
- ◆ Legal services
- ◆ Facilities management
- ◆ Information technology
- ◆ Medicare Part D program
- ◆ Diversity/EEO
- ◆ Affiliate relationships/cost allocation

Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including both electric and gas operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Elizabethtown Gas Company**NUI Corporation****New Jersey Natural Gas Company****New Jersey Resources Corporation****South Jersey Gas Company****South Jersey Industries Corporation***Lead Consultant*

- ◆ Restructuring
 - ◆ Affiliate relationships/transactions
 - ◆ Allocation of fees
 - ◆ Competitive services and code of conduct
-

Conducted compliance audits of the competitive services of New Jersey's gas utilities; specifically South Jersey Gas Company (South Jersey Industries Corporation), New Jersey Natural Gas Company (New Jersey Resources Corporation), and Elizabethtown Gas Company (NUI Corporation) as part of the utility industry restructuring in New Jersey. The purpose of these audits was to ensure that the utilities or their related competitive business segments do not have an unfair competitive advantage over other, non-affiliated purveyors of competitive services, and to evaluate and review the allocation of costs between the utilities' competitive and non-competitive services.

<p>Town of Middleborough <i>Senior Consultant</i></p> <ul style="list-style-type: none">◆ Strategic planning◆ Goals and objectives◆ Competitive assessment/benchmarking◆ Management and operations review◆ Communication with utility board	<p>Performed a competitive assessment of this municipal gas and electric department for the town of Middleborough, including a management review of all functional areas and benchmarking of major performance indicators in relation to other Massachusetts municipalities and to the best practices of other public and investor-owned utilities. The project resulted in an ongoing assignment with the Board of Commissioners to develop and implement a strategic plan, and develop and implement an information technology (IT) plan. The project included an all-day strategic planning session with the Board of Commissioners and City management personnel in attendance. The current situation of the municipality (strengths, weaknesses, opportunities, and threats) was developed and specific strategies, goals, and objectives identified and agreed to by the Commissioners and City management for addressing these items. Six months after the implementation of the strategic plan, a follow-up planning session was conducted to update the plan. The IT plan resulted in the standardization of computer hardware and software, the implementation of a wide area network (WAN) and an Internet presence by the municipality.</p>
<p>Pacific Gas & Electric Company <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Administrative and general costs for construction expenditures and operation expenses	<p>Reviewed costs of gas pipeline expansion project (PEP). The primary objectives included determining if the appropriate level of incremental A&G and O&M costs were charged to the project before and after commercial operation, and providing the data required to project the incremental operating costs of PEP interstate and intrastate operations serving California markets. Assessed the integrated pipeline operations providing natural gas (from Canada) to Northern and Southern California's retail customers, pipeline shippers, and interruptible customers to insure that costs were equitably distributed between PG&E regulated retail customers and unregulated project shippers.</p>
<p>Pennsylvania Gas and Water Company <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Cash management◆ Dividends to parent company◆ Affiliate relationships and transactions◆ Allocation of fees◆ Management information systems	<p>Performed a management and operations review in which she investigated various financial and administrative focus areas.</p>
<p>Philadelphia Gas Works <i>Lead Consultant & Expert Witness</i></p> <ul style="list-style-type: none">◆ Financial and accounting management◆ Customer billing and accounting◆ Management information systems <p><i>Engagement Manager & Lead Consultant</i></p> <ul style="list-style-type: none">◆ Evaluation of implementation of earlier management audit	<p>Performed a comprehensive management and operations review and completed a follow-up review approximately two years later that involved the following:</p> <ul style="list-style-type: none">◆ Examining results of the studies recommended during the management audit◆ Developing a request for proposal for long-term strategic options
<p>Synthetic Fuels Corporation <i>Lead Consultant and Project Manager</i></p> <ul style="list-style-type: none">◆ Correspondence tracking system◆ Fixed assets and consumables inventory◆ Human resources	<p>Conducted an operational consulting study to review company-wide operations and to assess the data processing requirements. Assisted with the planning, coordination, and implementation of computerized procedures and controls, including specification, development, and implementation of a correspondence tracking system, installation of a fixed assets and consumables inventory system, and installation of a human resources information system.</p>

Southern California Gas Company*Senior Consultant*

- ◆ Financial management
- ◆ Support functions

Performed a management and operations review in which she investigated the areas of financial management and administrative services, including cash collections and disbursements, cash forecasting, banking relationships, work order processing, accounts payable, and materials management.

Western Kentucky Gas Company*Lead Consultant*

- ◆ Financial management
- ◆ Customer services
- ◆ Management information systems
- ◆ Affiliate relationships and transactions
- ◆ Allocation of fees

Performed a management and operations review in which she investigated affiliated relationships, corporate finance, financial requirements planning/economic analysis, cash management, accounting, taxes, budgeting, internal auditing, rates, customer services (customer billing and accounting), and management information systems.

Water/Wastewater Utility Assignments

Tennessee-American Water Company

Engagement Manager, Team Leader, Senior Consultant, & Expert Witness

- ◆ Oversight for both management & operations team and internal controls review & sampling teams
- ◆ Affiliate relationships and transactions
- ◆ Management effectiveness and cost competitiveness of affiliate functions
- ◆ Cost accumulation and assignment
- ◆ Cost allocation methodologies
- ◆ Internal controls evaluation & sampling

Performed an affiliate audit of Tennessee-American Water Company (TAWC) at the request of the Tennessee Regulatory Authority (TRA). The audit included an investigation and assessment of the American Water Works Service Company management performance and decisions relating to internal processes and internal controls involving affiliate relationships and transactions, and the resulting recommendations of any management process changes needed for those controls and implementation. Further, the audit evaluated the charges allocated to TAWC, including the efficiency of processes and/or functions performed on behalf of TAWC, as well as the accuracy and reasonableness of the allocation factors utilized.

Pennsylvania-American Water Company

Engagement Manager, Project Manager, & Executive Consultant I

- ◆ Project planning and scheduling
- ◆ Financial management
- ◆ Corporate governance & Sarbanes-Oxley Act of 2002
- ◆ Corporate culture, management structure, and staffing levels
- ◆ Affiliate relationships/cost allocations
- ◆ Diversity/EEO
- ◆ Risk management/legal/technology
- ◆ Operational performance

Performed a stratified management and operations audit of Pennsylvania-American Water Company (PAWC) for the Pennsylvania Public Utility Commission (PaPUC) with the primary focus areas being costs borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses are of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Water Services Corporation of South Carolina

Lead Consultant

- ◆ Organizational design
- ◆ Affiliate relationships and allocation of revenues and costs
- ◆ Human resource policies and practices

Performed a management and operations review and assessment of Water Services Corporation (WSC) of South Carolina for the State of South Carolina Office of Regulatory Staff (ORS) with specific focus on the operations of the five subsidiary water and wastewater companies that operate in South Carolina, those being:

- ◆ Carolina Water Service, Inc. (CWS)
- ◆ Tega Cay Water Service, Inc. (TCWS)
- ◆ Utilities Services of South Carolina, Inc. (USSC)
- ◆ Southland Utilities, Inc. (SU)
- ◆ United Utility Companies, Inc. (UUC)

The bottom line of this project was to determine whether the rates charged to the South Carolina ratepayers can be reduced through the implementation of greater efficiencies in organizations, operations, or both. Additionally, another relevant analysis was a determination of whether the ratepayers of South Carolina are being properly and economically served by the range of corporate services that are provided to the WSC operations in South Carolina by the managers located in both West Columbia and Northbrook. Significant consideration was given to investigation of the potential benefits that would result from the consolidation or merger of the affiliated companies of WSC.

<p>United Water New Jersey</p> <p><i>Lead Consultant</i></p> <ul style="list-style-type: none"> ◆ Financial management and support services ◆ Cost allocation ◆ IT ◆ Records management 	<p>Performed a comprehensive management audit to analyze areas of finance and support services (information technology and records management).</p>
<p>Pennsylvania Gas and Water Company</p> <p><i>Lead Consultant</i></p> <ul style="list-style-type: none"> ◆ Cash management ◆ Dividends to parent company ◆ Affiliate relationships and transactions ◆ Allocation of fees ◆ Management information systems 	<p>Performed a management and operations review in which she investigated various financial and administrative focus areas.</p>
<p>American Water Works Association Research Foundation</p> <p><i>Senior Consultant</i></p> <ul style="list-style-type: none"> ◆ Organization and staffing 	<p>Assisted in the development of a guidance manual (<i>Meeting the Management, Organizational, and Staffing Challenges of the Water Utility Industry in the 1990s</i>) for evaluating organizational and staffing requirements for utilities. This manual is used by senior utility managers throughout the USA to assist them in responding to the tremendous challenges facing water utilities in the 1990s.</p>
<p>Philadelphia Suburban Water Company</p> <p><i>Lead Consultant</i></p> <ul style="list-style-type: none"> ◆ Information systems ◆ Financial management 	<p>Performed a management and operations review in which information technology was among several special objectives.</p>
<p>City of Niles (Michigan) Utilities Department</p> <p><i>Technical Adviser</i></p> <ul style="list-style-type: none"> ◆ Executive management and staffing ◆ Accounting and finance ◆ Human resources ◆ Support/management information systems 	<p>Conducted a management and operations review for the electric, water, and wastewater functions.</p>
<p>Kentucky-American Water Company</p> <p><i>Lead Consultant</i></p> <ul style="list-style-type: none"> ◆ Financial management ◆ Management information systems ◆ Affiliate relationships and transactions ◆ Allocation of fees 	<p>Performed a management and operations review in which she investigated the areas of financial management (affiliated relationships, corporate finance, financial requirements planning and economic analysis, cash management, management accounting, taxes, budgeting management and control, internal auditing, and rates) and management information systems.</p>

Mr. Dennis J. Schumaker, CMC[®], MCSE, MCSA Project Manager & Principal Consultant

Background

Mr. Dennis J. Schumaker has over 30 years of business and industry experience with both private and public sector clients, including extensive experience in the electric, gas, telephone, and water utility industries. Mr. Schumaker's consulting experience encompasses expertise in executive management and staffing, strategic and corporate planning, corporate organization and structure, project management, business process re-engineering, materials management, engineering and construction and operations and maintenance (electric, telephone, gas, and water facilities), information technology, cost allocation and affiliated transactions, and quality assurance. He began his career as a *Design Engineer* with the Bechtel Corporation, after which he joined Theodore Barry & Associates (TB&A) as a *Manager*. He acquired more than eight years of consulting experience with TB&A before becoming one of the original founders of Schumaker & Company in 1986.

Education & Certifications

Mr. Schumaker holds both a Bachelor's degree in Mechanical Engineering and a Master's in Nuclear Engineering from the Ohio State University. He also earned an MBA from the University of Michigan. He is a:

- ◆ *Certified Management Consultant (CMC[®])*
- ◆ *Microsoft Certified Systems Engineer (MCSE)*
- ◆ *Microsoft Certified Systems Administrator (MCSA)*

Consulting Expertise

- ◆ Strategic and operations planning
- ◆ Management and operations reviews and assessments
- ◆ Business process re-engineering
- ◆ Project management services
- ◆ Quality assurance services
- ◆ Competitive analyses including customer surveys
- ◆ User requirements definition and needs assessments
- ◆ Information systems design and development
- ◆ Information technology planning, integration, and optimization
- ◆ Workforce Management
- ◆ Affiliate relations and transactions

Professional Affiliations

- ◆ Project Management Institute (PMI)
- ◆ Microsoft Project User Group (MPUG) South East Michigan Chapter
- ◆ PMI Great Lakes Chapter
- ◆ Institute of Management Consultants (IMCUSA)

State & Local Government Experience

Mr. Schumaker has performed numerous assignments for state and local government clients. This work has included strategic and operations planning assistance, management and operations reviews, business process reviews, information technology studies, and information technology systems implementation projects. Some examples include:

- ◆ City of Detroit – provided business process reviews and assessment in public works, streets, and fire department.
- ◆ City of Ann Arbor – Management and operations review of Ann Arbor Housing Commission
- ◆ City of Sturgis, Marshall, Coldwater – management and operations review of all city operations
- ◆ City of Dearborn – information technology assessment and parks and recreations assessments
- ◆ Wayne County Airport Authority – information technology assessment
- ◆ State of Michigan, Department of Environmental Quality – functional requirements definition and document management systems implementation



State government entities include:

♦ Alaska	♦ Indiana	♦ Minnesota	♦ New York	♦ Tennessee
♦ Arizona	♦ Iowa	♦ Mississippi	♦ N. Dakota	♦ Texas
♦ Arkansas	♦ Kansas	♦ Montana	♦ Ohio	♦ Utah
♦ California	♦ Kentucky	♦ Nebraska	♦ Oklahoma	♦ Washington
♦ Colorado	♦ Maine	♦ Nevada	♦ Oregon	♦ Wisconsin
♦ Idaho	♦ Maryland	♦ New Mexico	♦ Pennsylvania	♦ Wyoming
♦ Illinois	♦ Massachusetts	♦ New Jersey	♦ S. Dakota	

Local government entities include:

♦ City of Ann Arbor Housing Commission (MI)	♦ City of Marshall (MI)	♦ Town of Clinton (MI)
♦ City of Coldwater (MI)	♦ City of Niles (MI)	♦ Town of Middleborough (MA)
♦ City of Dearborn (MI)	♦ City of Philadelphia (PA)	♦ Town of Union City (MI)
♦ City of Detroit (MI)	♦ City of Sturgis (MI)	♦ Wayne County Airport Authority (MI)
♦ City of Hillsdale (MI)	♦ City of Tacoma (WA)	

Utility Commission Experience

Additionally, Mr. Schumaker has performed comprehensive and/or focused performance reviews for regulatory commissions and agencies, including:

Alaska Public Utilities Commission	Maryland Public Service Commission	Oregon Public Utilities Commission
Arizona Corporation Commission	Massachusetts Department of Public Utilities	Pennsylvania Public Utility Commission
Arkansas Public Service Commission	Michigan Public Service Commission	Public Service Commission of Wisconsin
California Public Utilities Commission	Minnesota Public Utilities Commission	Public Utility Commission of Ohio
Colorado Public Utilities Commission	Mississippi Public Service Commission	Public Utility Commission of S. Carolina
Idaho Public Utilities Commission	Montana Public Service Commission	Public Utility Commission of Texas
Illinois Commerce Commission	Nebraska Public Service Commission	Public Service Commission of Utah
Indiana Utility Regulatory Commission	Nevada Public Service Commission	South Dakota Public Utilities Commission
Iowa Utilities Board	New Mexico Public Regulation Commission	Tennessee Regulatory Authority
Kansas Corporation Commission	New Jersey Board of Public Utilities	Tennessee Valley Authority
Kentucky Public Service Commission	New York Public Service Commission	WA Utilities & Transportation Commission
Maine Public Utilities Commission	North Dakota Public Service Commission	Wyoming Public Service Commission

Utility Company Experience

Some of Mr. Schumaker's electric, gas, water/wastewater, and telecommunications assignments are listed below:

Electric Utilities

AEP/Kentucky	General Public Utilities	Pennsylvania Power & Light Company
AEP/Indiana Michigan Power	Georgia Power Company	Public Service Company of New Mexico
Alpena Power	GP Energy	Public Service Electric & Gas Company
Arkansas Power & Light Company	Illinois Power Company	Rockland Electric Company
Central Maine Power Company	Jacksonville Electric Authority	Sierra Pacific Power Company
Cleveland Electric Illuminating	Jersey Central Power and Light	Springfield City Utilities
City of Hillsdale	Kingsport Power Company	Sunflower Electric Cooperative
City of Niles Utilities Department	Long Island Lighting Company	Tacoma Power
Columbus Southern Power Company	Michigan South Central Power Agency	Tennessee Valley Authority
Conectiv	Nebraska Public Power district	Toledo Edison Company
Consumers Energy	New Orleans Public Service	Union Electric Company
Detroit Edison	Niagara Mohawk Power Company	Union Light Heat and Power Company
Duke energy Ohio	Nova Scotia Power Incorporated	Upper Peninsula Power Company
Entergy	Ohio Power Company	United Power Cooperative
El Paso Electric Company	Pacific Gas & Electric Company	West Texas Utilities
Florida Power and Light Company	PECO Energy Company	Wisconsin Electric Power Company

Gas Utilities

Baltimore Gas and Electric Company	Niagara Mohawk Power Company	South Jersey Gas Company
Columbia Gas of Maryland Inc.	Pacific Gas & Electric Company	Southern California Gas Company
Elizabethtown Gas Company (NUI Corp.)	Peoples Natural Gas Company	Union Light Heat and Power Company
Equitable Gas Company (EQT Corp.)	Philadelphia Gas Works	Washington Gas Light Company
New Jersey Natural Gas Company	Public Service Electric & Gas Company	Western Kentucky Gas Company

Water/Wastewater Utilities

General Waterworks Corporation of Pine Bluffs	Tennessee-American Water Company
Kentucky-American Water Company	United Water New Jersey
Pennsylvania-American Water Company	Water Services Corporation of South Carolina
Philadelphia Suburban Water Company	

Telecommunications Utilities

ALLTEL Pennsylvania	Illinois Bell Telephone (Ameritech)	Verizon NY
Commonwealth Telephone Company	SBC Ameritech Indiana	Verizon PA
New England Telephone (NYNEX)	US WEST	

Presentations & Articles

- ◆ *User Interface Standards - Reports, Smart Access, March 2002* – This article discussed the standards for creating the various reports used within an application. It discusses standards that can be developed not only for the reports themselves but also the user interface from which the user can choose and customize the reports.
- ◆ *User Interface Standards - Design Development Documentation, Smart Access, April 2002* – This article discussed the various alternatives for creating maintenance forms that are the core to any business application. It discusses standards that can be developed for implementing these forms and presents the code that makes the user interface work.
- ◆ *User Interface Standards, Navigation Smart Access, September 2001* – This article discussed the importance of user interface standards for both programmer and end-user productivity. Using a case study, it presents a discussion of the navigation methods available to an Access programmer and shows how to implement the most useful ones.
- ◆ *User Interface Standards - Implementing Business Process Forms, Smart Access, November 2001* – This article discussed the various alternatives for creating business process forms that are the core to any business application. It discusses standards that can be developed for implementing these forms and presents the code that makes the user interface work.
- ◆ *User Interface Standards - Implementing Application Maintenance Forms, Smart Access, December 2001* – This article discussed the various alternatives for creating application maintenance forms that are the core to any business application. It discusses standards that can be developed for implementing these forms and presents the code that makes the user interface work.
- ◆ *Dose of One's Own Medicine, June 1998* – National Project Management Institute Meeting Presentation: Project management self assessment and successful implementation of a department's Project Management System.

Technical Exams Successfully Completed

Mr. Schumaker has successfully completed the following Microsoft exams:

- ◆ 220 – Designing Security for a Microsoft Windows 2000 Network
- ◆ 219 – Designing a Microsoft Windows 2000 Directory Services Infrastructure
- ◆ 218 – Managing a Windows 2000 Network Environment
- ◆ 217 – Implementing and Administering a Microsoft[®] Windows[®] 2000 Directory Services Infrastructure
- ◆ 216 – Implementing and Administering a Microsoft[®] Windows[®] 2000 Network Infrastructure
- ◆ 215 – Installing, Configuring, and Administering Microsoft[®] Windows[®] 2000 Server
- ◆ 210 – Installing, Configuring, and Administering Microsoft[®] Windows[®] 2000 Professional
- ◆ 087 – Implementing/Supporting Microsoft[®] Internet Information Server 4.0
- ◆ 076 – Implementing and Supporting Microsoft Exchange Server 5.0
- ◆ 073 – Implementing and Supporting NT[™] 4.0 Workstation
- ◆ 068 – Implementing and Supporting NT[™] Server 4.0 in the Enterprise
- ◆ 067 – Implementing and Supporting NT[™] Server 4.0
- ◆ 059 – Internetworking with Microsoft TCP/IP on Windows NT[™] 4.0
- ◆ 058 – Networking Essentials



Consulting Experience

Project Management Experience

Mr. Schumaker is a *Project Management Professional* (PMP[®]). He has acted as *Engagement Manager, Project Manager, Lead Consultant, or Technical Consultant* on numerous management reviews at the request of both state and local government entities and directly for companies. These assignments involved the implementation of project management techniques into a business or government entity's internal operations. He is a member of the Project Management Institute (PMI) and presented the application of PMI methodologies titled *A Dose of One's Own Medicine*, which involved a large utility client providing services in various states at a national PMI meeting. He is also a member of the mid-western Microsoft Project Users Group.

With over 30 years of consulting experience, Mr. Schumaker has been the Project Manager for over 100 different assignments. Over 25 of these assignments involved the review and implementation of project management techniques to a business or government entity's internal operations. These projects included nuclear and fossil power plant projects, electric and gas transmission and distribution projects, water plant and distribution engineering and construction projects, telecommunications installation projects, and research and development projects.

Mr. Schumaker has implemented project management systems (mainframe and minicomputer-based systems) on assignments ranging from large multi-billion dollar nuclear and fossil generation projects to large ongoing software development projects. Project management software systems used include: Microsoft Project, APECS, Project 2, Artemis, Workbench, Primavera, @Risk for Project, and all Microsoft Office applications, including Word, Excel, PowerPoint, Access, Project, and Microsoft Back Office products, including all versions of Windows, Exchange Server, SharePoint, Internet Information Server, SQL Server, Internet Security and Acceleration Server (ISA), and Systems Management Server (SMS).

Electric and Gas Operations Experience

Mr. Schumaker's evaluation of electric and gas operations includes a review of the organization and staffing of the operations group (electric and gas operations and maintenance and electric and gas construction) in relation to its ability to perform its chartered responsibilities in an effective and timely manner. This review investigates work and information flows, staffing levels over time, work order and work assignment procedures, and crew utilization and scheduling techniques.

Evaluating the current practices of a utility, he investigates the use of decision support systems and information technology in the management of the assets (both transmission and distribution) to determine (a) whether the processes used are consistent with currently accepted levels of technology for utility industry in general, (b) whether these processes are properly designed to support the organization in providing superior service to its customers, and (c) whether the utility attempts to tie expenditures to performance levels.

Additionally, he evaluates the engineering design and construction management functions as these are key areas to the efficient and effective operation and construction of the network that is the basis for the provision of reliable service to the customer. The engineering design and planning function must be capable of determining with accuracy the future requirements for service and making the proper provisions for same through the timely conceptualization and design of future facilities.

City of Niles (Michigan) Utilities Dept.	Kingsport Power Company	Philadelphia Gas Works
Columbus Southern Power Company	Middleborough Gas and Electric Dept.	Public Service Company of New Mexico
Dayton Power & Light Company	New Orleans Public Service	Tacoma Power T&D
Duke Energy Ohio	PECO Energy Company	Union Light, Heat and Power Company
El Paso Electric Company	Pennsylvania Power & Light Company	West Texas Utilities Company
Equitable Gas Company	Pennsylvania Gas and Water Company	Western Kentucky Gas Company
Jersey Central Power & Light		

Utility Management & Operations Audit Experience

Mr. Schumaker has been an *Engagement Manager, Project Manager, Lead Consultant, or Technical Consultant* on more than 50 management and operations reviews. He has also testified before five regulatory commissions. His specific experience in the electric, gas, water, and telecommunications industries includes assignments at over 75 different electric, water, or gas utilities. Sustaining or improving the reliability of aging assets, while minimizing operational, maintenance, and capital costs is vital to every utility company. Also, managing risks (operational, safety, environmental, etc.) and maximizing worker productivity remain key aspects of any business. In order to maintain a solid return on investment from year to year, utility operations must design and implement a plan for managing their assets.

His management audit work has focused on management and operations assessments and performance reviews; business restructuring, business process re-engineering, and process analysis teams; affiliated transactions and cost allocations; customer satisfaction and needs assessments; performance measurement development; and information systems and technology.

Electric and Gas Reliability Experience

The efficiency and effectiveness of the management of the transmission and distribution assets within an electric utility and the gas distribution system in a gas utility directly translates into the system reliability experienced by the customer. The decision making regarding the management of these assets should incorporate the use of extensive quantitative data available from within the organizational information technology resources. The overall organization of the various functions related to electric and gas distribution should be efficient and effective with clearly defined roles and responsibilities, staffing levels that are workload driven, and adequate consolidation of activities.

Gas reliability is somewhat different than electric reliability in that the primary focus is that of managing overall system risk. Processes need to be in place to repair (replace) system leaks on an ongoing basis such that the leaks do not result in catastrophic failures of the distribution piping. Mr. Schumaker's investigations in the area of gas reliability focus on the decision support tools used to identify gas repair/replacement projects, tools to rank and prioritize these projects for execution, and the subsequent execution of these projects.

Mr. Schumaker's assessment of electric and gas system reliability performance and related operations includes, but is NOT limited to, the following:

- ◆ A review of electric trends as measured by the Customer Average Interruption Duration Index, System Average Interruption Duration Index, System Average Interruption Frequency Index, and Momentary Average Interruption Frequency Index relative to Utility Commission benchmarks and standards, as applicable
- ◆ Testing the electric outage management system data collection process to assess the accuracy of the information being captured in the system
- ◆ A review of service outage causal factor trends and remedial actions to ensure that preventable outages are maintained at reasonable levels
- ◆ A review of electric and gas maintenance activities to determine their overall appropriateness and adherence to internal specifications as well as any applicable regulatory requirements
- ◆ A review of gas infrastructure replacement efforts, in particular related to replacement of unprotected bare steel mains
- ◆ A review of the Company's damage prevention programs including the electronic mapping of electric and gas system facilities, the trend of third-party line hits, and damage recovery efforts

Electric Utilities

AEP/Kentucky	Florida Power and Light Company	PECO Energy Company
AEP/Indiana Michigan Power	General Public Utilities	Pennsylvania Power & Light Company
Alpena Power	Georgia Power Company	Public Service Electric & Gas Company
Arkansas Power & Light Company	GP Energy	Rockland Electric Company
Central Maine Power Company	Illinois Power Company	Sierra Pacific Power Company
Cleveland Electric Illuminating	Jacksonville Electric Authority	Springfield City Utilities
City of Hillsdale	Jersey Central Power and Light	Sunflower Electric Cooperative
City of Niles Utilities Department	Kingsport Power Company	Tennessee Valley Authority
Columbus Southern Power Company	Long island lighting Company	Toledo Edison Company
Conectiv	Michigan South Central Power Agency	Union Electric Company
Consumers Energy	Nebraska Public Power district	Union Light Heat and Power Company
Detroit Edison	New Orleans Public Service	Upper Peninsula Power Company
Duke energy Ohio	Niagara Mohawk Power Company	United Power Cooperative
Entergy	Ohio Power company	West Texas Utilities
El Paso Electric Company	Pacific Gas & Electric Company	Wisconsin Electric Power Company

Gas Utilities

Baltimore Gas and Electric Company	New Jersey Natural Gas Company	Public Service Electric & Gas Company
Columbia Gas of Maryland Inc.	Niagara Mohawk Power Company	South Jersey Gas Company Western
Elizabethtown Gas Company (NUI Corp.)	Pacific Gas & Electric Company	Southern California Gas Company
Equitable Gas Company (EQT Corp.)	Peoples Natural Gas Company	Union Light Heat and Power Company
Kentucky Gas Company	Philadelphia Gas Works	Washington Gas Light Company



Energy Procurement, Trading, Contracting, and Purchased Power Experience

Mr. Schumaker has performed various assessments of energy procurement (electric and gas) and energy trading and contracting at numerous private and public utilities and agencies. These reviews have included assessment of various electric power supply contracts (purchased power), fuel procurement policies and practices, and energy trading activities. These reviews also included an assessment of generation dispatching and transmission dispatch (tagging) operations. These reviews also included real time, day ahead, and longer term (future) contracting including physical and financial hedging practices.

Mr. Schumaker has been involved in the energy trading activities of numerous different electric companies in both a completely regulated environment and in a deregulated environment. He understands the theories behind economic dispatch and energy trading and has been involved in performing assessment of various aspects of these activities. As an engineer by training, he not only understands the business aspects of energy trading but also the technical aspects as it relates to the various business models within the industry.

City of Sturgis	Pennsylvania Power & Light Company
Dayton Power & Light Company	PJM
Duke Energy Ohio	Public Service Company of New Mexico
El Paso Electric Company	Sunflower Electric Cooperative
ISO New England	American Electric Power (Ohio Power Company and Columbus Southern Power)
Jersey Central Power & Light	FirstEnergy (Toledo Edison, Ohio Edison, Cleveland Electric Illuminating)
Michigan South Central Power Agency	Union Light, Heat and Power Company (Duke Energy Ohio)
Midwest Independent System Operations	West Texas Utilities Company (now AEP)
New York Independent System Operator	Various utility energy trading and dispatch operations

Fuels and Purchase Power Experience

Mr. Schumaker has over 30 years of business and industry experience in the electric utility industry. This experience includes stints with Bechtel Corporation, which included the design of both nuclear and fossil power plant (including coal power plants), with Theodore Barry and Associates, which included fuel procurement studies for new power plant siting and approvals, and with Schumaker & Company, which has continued to involve activities relating to fuel management. His ongoing fuel procurement activities of power plants have included all the companies listed here.

Most recently, he has completed a fuel and purchased power cost adjustment clause audits of Public Service Company of New Mexico for the New Mexico Public Regulation Commission, Duke Energy Ohio for the Public Utilities Commission, and Dayton Power & Light. He also performed fuel management audits for state regulatory commissions including eight different assignments in the State of Ohio involving FirstEnergy companies Toledo Edison and Cleveland Electric Illuminating; AEP companies Columbus Southern and Ohio Power; Cincinnati Gas and Electric; and Dayton Power and Light. He understands the management and technical issues involving fuels management but also the procedural and administrative issues involved in performing such a review.

Arkansas Power and Light facilities	New Orleans Public Services oil-fired facilities
Central Maine Power facilities	Nova Scotia Power Incorporated
Consumers Power and Detroit Edison (DTE) facilities (MI)	Pennsylvania Power and Light facilities
Dayton Power & Light Company	Public Service Company of New Mexico
Duke Energy Ohio	Sierra Pacific facilities
El Paso Electric Company	Springfield City (MO) Utilities with coal sources from Pittsburg (KS)
Georgia Power facilities	TVA facilities (TN)
Illinois Power facilities	Union Light Heat and Power Company (KY)
Jersey Central Power & Light	West Texas Utilities facilities and Central Power and Light facilities
Nebraska Public Power District – Gerald Gentleman Plant	

And:

Electricity Supply Board of Ireland (ESB) facilities, including hydro, natural gas, oil, peat, and a new coal-fired plant
 FirstEnergy, including Toledo Edison & Cleveland Electric Illuminating (OH); American Electric Power, including Columbus Southern Power and Ohio Power; Cincinnati Gas and Electric; and Dayton Power and Light facilities
 Florida Power and Light and Tampa Electric facilities and Jacksonville Electric Authority facilities
 Northern State Power (now Excel Energy) and United Power Cooperative (plant located in North Dakota) (MN)
 Sunflower Electric Cooperative, a new coal-fired plant siting and fuel supply (KS)

Customer Service Experience

Mr. Schumaker examines the utilities customer service, billing, and collection functions in detail. Among the areas or issues to be addressed in his examination are:

- ◆ The capabilities and effectiveness of customer information and billing systems compared to other electric utilities systems and the training of customer service personnel in system utilization
- ◆ The reasonableness of call center staffing levels and the center's overall performance (e.g., call abandonment rate, percentage of call answered within 30 seconds, etc.) to include validation of telephone access statistics, and a determination of the adequacy of interactive voice response (IVR) equipment and telecommunications technology in general
- ◆ Customer complaint procedures, including a review of their compliance with utility commission dispute handling procedures
- ◆ The trend of consumer complaint rates, justified complaint rates, and complaint response times

ALLTEL Pennsylvania	New Orleans Public Service	Tennessee-American Water Company
Central Maine Power Company	Corporation PECO Energy Company	United Water New Jersey
Commonwealth Telephone Company	Pennsylvania-American Water Company	Verizon New York
Equitable Gas Company	Philadelphia Gas Works	Water Services Corp. of South Carolina
General Waterworks Corp. of Pine Bluff	Philadelphia Suburban Water Company	Western Kentucky Gas Company
Nebraska Public Power District		

Smart Meter Technologies Experience

Mr. Schumaker's AMI-SmartGrid consulting practice area will focus on the selection, deployment, and integration of advanced metering infrastructure (AMI), meter data management (MDM), and demand response (DR) systems and solutions as well as the associated business process redesign required to ensure their effective use.

His relevant experience and familiarity with smartgrid initiatives and their interdependency on the complex interaction of available and emerging automation, communications, and metering technologies assists utility clients to create financial models and develop risk mitigation approaches and strategies to help them manage investment risk, and promote strategies to justify grid modernization investments and solutions.

Mr. Schumaker has been involved in Automatic Meter Reading (AMR) investigations over the last four years. These AMR investigations have included electric, gas, and water companies throughout the United States. As a component of our management and operations review projects, Mr. Schumaker has assessed the results achieved by specific utilities as a result of their implementation of AMR technologies. A sample of his experience includes:

- ◆ CellNet fixed network AMR technologies systems that were initially justified based on a reduction in meter reading costs, and since have had cost savings in other areas eclipse the meter reading cost savings
- ◆ ITRON mobile system meters read on a monthly basis by a contracted firm. Cost savings identified in the initial business case were exceeded in the look back analysis after implementation.
- ◆ ITRON mobile solution meters are read on a monthly basis and due to battery lives not meeting expectations, they are currently undergoing their first battery replacement program.

Review of various implemented AMR technologies within various water operating companies. Follow-up analysis based on the experience on these systems lead to standardized fixed network systems. Implementation of AMR within an operating company was based on a specific business case for that specific operating company. The business cases were developed subject to the business case guidelines promulgated from the company. As a result, whether a fixed or mobile meter reading system was deployed, decisions were based on the total number of customers, meter density, and other parameters for each operating water district.

Equitable Gas Company	PECO Energy Company
Philadelphia Gas Works	Pennsylvania-American Water Company

Coal Mining Operations Experience

Mr. Schumaker has performed management audits of mining operations as a part of fuel procurement audits and other investigations, including his most recent audit and prudence review of Public Service Company of New Mexico.

Fuel procurement audits of the AEP Ohio Power included a review of both surface mining operations and deep mining operations (long wall mining operations) for mines located in Ohio. Fuel procurement reviews of some of the FirstEnergy

companies included captive mining operations.

Investigations at the City of Springfield, Missouri included surface mining operations in Pittsburg, Kansas, and Sunflower Electric Cooperative included surface mining in the Power River Basin, and Nebraska Public Power District included Power River Basin coal sources.

Mine mouth power plant operations have been addressed in Ohio, Texas, Pennsylvania, Kentucky, and North Dakota.

- ◆ Electricity Supply Board of Ireland (ESB) facilities, including hydro, natural gas, oil, peat, and a new coal-fired plant
- ◆ FirstEnergy, including Toledo Edison & Cleveland Electric Illuminating (OH); American Electric Power, including Columbus Southern Power and Ohio Power; Cincinnati Gas and Electric; and Dayton Power and Light facilities
- ◆ Florida Power and Light and Tampa Electric facilities and Jacksonville Electric Authority facilities
- ◆ Nebraska Public Power District – Gerald Gentleman Plant
- ◆ Northern State Power (now Excel Energy) and United Power Cooperative (plant located in North Dakota, MN)
- ◆ Nova Scotia Power Incorporated
- ◆ Pennsylvania Power and Light facilities
- ◆ Public Service Company of New Mexico
- ◆ Springfield City (MO) Utilities with coal sources from Pittsburg, KS
- ◆ Sunflower Electric Cooperative, a new coal-fired plant siting and fuel supply (KS)
- ◆ Union Light Heat and Power Company (KY)
- ◆ West Texas Utilities facilities and Central Power and Light facilities

Corporate Governance Experience

It's all about how structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as, the board of directors, managers, shareholders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs. In this area, Mr. Schumaker reviews the Board of Directors composition and function, organization structure and planning, executive compensation, relationships with affiliated interests, management communications and control, and administrative procedures and controls.

Equitable Gas Company

Pennsylvania American Water Company

West Texas Utilities

PECO Energy Company

Philadelphia Gas Works

Western Kentucky Gas Company

Pennsylvania Power and Light Company

Union Light Heat and Power Company

Reliability and Storm Preparedness Experience

Mr. Schumaker has engaged in efforts to assist clients in utility workforce management by reviewing operations and staffing for storm preparedness and response. His energy practice is committed to providing quality methods, tools, and experience to advance the effectiveness of the clients' energy delivery businesses.

Success in today's environment depends on an energy company's ability to proactively address regulator and customer expectations, and provide reliable service at the lowest possible cost. Mr. Schumaker works with clients to ensure the availability of accurate and easily accessible reliability data, establish clear accountability for all process participants, and link financial system information to reliability performance in order to enhance the decision-making process. His integrated reliability strategy services include: strategy development, vegetation management, and implementation of several decision support tools. His efforts include, but are not limited to:

- ◆ Providing extensive analysis of the transformation initiative for electric transmission and distribution operations (including storm preparedness and response).
- ◆ Evaluating distribution automation schemes which affected customers in a local area served by automated loops for improvement in reliability as an attractive investment to supplement other initiatives to improve system-wide reliability.
- ◆ Reviewing various ways in which outage statistics are collected, verified, and reported including implementing computerized outage management systems (OMS) to identify the extent of the outage and predict the location of the problem. An outage report is initiated in two basic ways. The standard method for determining the outage

start time is from a customer call reporting the outage. The outage start time is defined as the time of the customer call. Calls are received and outage reports are entered into the OMS. Most utilities in the United States rely on this method of identifying the outage start time. With automatic meter reading technology, outages are also reported via an AMR system.

- ◆ Assessing how outages are reported, analyzed, dispatched, and closed out.
- ◆ Testing the validity of some SAIFI and CAIDI information being reported using reliability reporting sampling wherein each outage record sampled is verified from the start time of the AMR information, includes the number of customers affected and customer minutes, restore time, number of customers restored, and customer hours with information reported in the outage calendar.
- ◆ Addressing the workforce and manpower planning process, contract versus in-house decision-making, overtime control, productivity, staffing levels, proposed labor saving investments, and reward systems during an audit in the areas of work management, transmission and distribution (including storm preparedness and response).
- ◆ Reviewing existing reliability programs over a previous 12 month period by examining records of actions taken as a result of the analyses from these programs. As a result of these reviews, clients have made changes in their distribution network, including such things as the as the installation of distribution automation schemes, installation of 3-phase and single-phase reclosers, additional animal guards, replacement of equipment determined to be less reliable than newer equipment, reconfiguration of circuits, accelerated vegetation trimming, etc.

Conectiv
Jersey Central Power and Light Company
Kentucky Power Company/AEP

PECO Energy
Public Service Electric & Gas

Rockland Electric
Tacoma Power

Section 11 & Rate Case Verification Experience

Mr. Schumaker has engaged in efforts to assist Commission Staff in verifying that the requirements of Section 11, Public Act No 286 of 2008 were being satisfied for electric utilities in the state. Regulated energy utilities file rate cases with the Commission for approval. The Commission issues an order after reviewing the testimony and exhibits of the utility, interveners, and the Commission Staff. He conducted orientation meetings with Commission Staff, developed a checklist to guide the review for expected rate design, performed spot checks on cost of service study and rate design calculations made, and drafted a report highlighting background and perspective, findings and conclusions, and recommendations.

Detroit Edison
Consumers Energy

Alpena Power
Upper Peninsula Power Company

Wisconsin Electric Power
Indiana Michigan Power

Utility Industry Restructuring Experience

Mr. Schumaker has conducted restructuring studies, compliance audits, and code of conduct audits of electric and gas utilities. Their purpose was to ensure that the incumbent utilities or their related competitive business segments do not have an unfair competitive advantage over other, non-affiliated purveyors of competitive services, and to evaluate and review the allocation of costs between competitive and non-competitive services of the utilities. He has offered expert opinion, based on appropriate methodology, as to whether there is strict separation and allocation of each utility's revenues, costs, assets, risks, and functions between the utility's electric and/or gas distribution operations and its related competitive business segments. In many cases the audits (1) determined whether there is cross subsidization between utility and non-utility segments within a public utility or holding company; (2) whether the separation of utility and non-utility organizations is reasonable based on the state commission's affiliate relation and fair competition standards; (3) the effect on ratepayers of the use of utility assets in the provision of non-safety-related competitive services; (4) the effect on utility workers; (5) the effect of utility practices on the market for such services; and (6) to ensure compliance with legislation. He has given his opinion on whether any other service(s) offered by the utilities was a competitive service. Clients include:

- ◆ Elizabethtown Gas Company, NUI Corporation
- ◆ New Jersey Natural Gas Company, New Jersey Resources Corporation
- ◆ South Jersey Gas Company, South Jersey Industries Corporation

Assignment Experience

The following pages contain Mr. Schumaker's relevant client list.

Electric Utility Assignments

City of Tacoma, Department of Public Utilities, Light Division

Engagement/Project Manager & Lead Consultant

- ◆ Management and operations
- ◆ Performance management program
- ◆ Asset management for engineering, construction & maintenance, and electric service

Assisted the City of Tacoma, Department of Public Utilities, Light Division (dba Tacoma Power) with a comprehensive review and assessment of Tacoma Power Transmission and Distribution (T&D) Sections' management and operation practices. Schumaker & Company applied an Enterprise Performance Management approach that emphasized the relationship between service levels and costs. The mission of the enterprise was to provide good service at the lowest long-term total cost. Further, every enterprise management team has the responsibility to develop, implement and execute a performance management program that delivers measurable good service at the lowest long-term total cost. The Schumaker & Company approach evaluated the service and cost performances of Tacoma Power's T&D Section and recommended improvements in service levels as appropriate and cost reductions as practical.

El Paso Electric Company

Engagement Manager & Executive Consultant I

- ◆ Coal costs and plant operations
- ◆ Nuclear fuel expenses
- ◆ Line losses
- ◆ Purchased power expense and sales for resale

Assisted the New Mexico Public Regulation Commission (NMPRC) staff in a prudence review and audit of the fuel and purchased power cost adjustment clause (fuel clause) and related documentation of the electric business operations of El Paso Electric Company (EPE), specifically to provide professional auditing and prudence review services of EPE's fuel and purchased power costs, fuel clause filings and related documentation for the period of January 1, 2010 through December 31, 2010. This review investigated whether EPE's calculation of the fuel clause was accurate and the costs included in the fuel clause included only allowed costs and EPE's current accounting and internal control policies, management practices, and operational procedures, as they pertain to EPE's administration of the fuel clause, were effective and met related requirements.

Jersey Central Power & Light

Project Manager & Executive Consultant I

- ◆ Fuel procurement and purchasing
- ◆ Market conditions
- ◆ Recommendations and review of previous analysis
- ◆ Remediation costs
- ◆ Distribution and operations maintenance
- ◆ Extensions and upgrades to provide regulated services
- ◆ Clean energy
- ◆ Contractor performance

Assisted the New Jersey Board of Public Utilities in an audit of the affiliated transactions between Jersey Central Power and Light (JCP&L) and its affiliates, and a comprehensive management audit of JCP&L. Task areas included an examination of affiliate relationships and cost allocation methodologies, executive management and corporate governance, organization structure, human resources, strategic planning, finance, accounting and property records, cash management, procurement and purchasing of energy, distribution and operation management, extensions and upgrades to provide regulated services, clean energy, market conditions, contractor performance, customer service, external relations, support services, and a review of actions taken by JCP&L regarding prior audits. As part of the audit, Schumaker & Company reviewed and assessed affiliate cost allocation methodologies to determine accounting and allocation procedures for separating the costs of inter-company transactions. Analysis determined if current accounting and allocation procedures were equitable, fair, and did not favor certain affiliates over JCP&L and its ratepayers. Additionally, examination assessed the electric generation policies, distribution policies, and assignment strategies of JCP&L and its affiliates.

Dayton Power & Light Company

Project Manager & Executive Consultant I

- ◆ Fuel procurement procedures/practices
- ◆ Operations and maintenance practices
- ◆ Management performance

Provided fuel cost recovery rider audit co-sourcing assistance to Dayton Power and Light Company (DP&L) to prepare DP&L for its annual review and audit to take place in the first quarter of 2011 for calendar year 2010. Items covered in the scope of work included fuel prices, allocation between wholesale and retail, sharing of gains and losses, coal handling costs, environmental compliance, PJM-related charges, power plant performance, and utility industry perspective.

State of Maine Public Advocate

Engagement Manager & Executive Consultant I

- ◆ Regulatory and reliability merger implications

Provided regulatory and litigation support to the Public Advocate in its intervention in a petition filed on March 18, 2010 at the Maine Public Utilities Commission by Bangor Hydro-Electric Power Company, Maine Public Service Company, Maine Electric Power Company, Inc., and Chester SVC Partnership requesting an approval of reorganization (35-A M.R.S.A. §§ 708 and 1103) financial provisions. Specifically, Schumaker & Company consultants were responsible for analyzing all pertinent data and presenting overall recommendations on the regulatory (including reliability) implications of the proposed merger.

Duke Energy Ohio

Engagement Manager & Executive Consultant I

- ◆ Coal costs and plant operations
- ◆ Power interruptions
- ◆ Midwest ISO charges analysis

Assisted the Public Utilities Commission of Ohio (PUCO) staff in a management/performance and financial audit of the fuel and purchased power and system reliability tracker riders of Duke Energy Ohio, Inc. Specifically, conducted an audit of the company's fuel costs (including any renewable energy costs) plus an audit of system reliability costs. This audit addressed the management/performance and financial aspects of the recovery mechanism. It consisted of a three-year audit cycle (2009-2011) with a complete and thorough audit being conducted in each year of the audit cycle. The initial audit included the actual cost for Rider PTC-FPP and SRT for the months January through December 2009.

Public Service Company of New Mexico

Engagement Manager & Executive Consultant I

- ◆ Coal costs and plant operations
- ◆ Nuclear fuel expenses
- ◆ Line losses
- ◆ Purchased power expense and sales for resale

Assisted the New Mexico Public Regulation Commission (NMPRC) staff in a prudence review and audit of the fuel and purchased power cost adjustment clause (fuel clause) and related documentation of the electric business operations of Public Service Company of New Mexico (PNM). In specific, to provide professional auditing and prudence review services of PNM's fuel and purchased power costs, fuel clause filings and related documentation for the period of June 1, 2008 through June 30, 2009. This review provided documented evidence on the following:

- ◆ PNM's calculation of the fuel clause is accurate and the costs included in the fuel clause include only allowed costs
- ◆ PNM's current accounting and internal control policies, management practices, and operational procedures as they pertain to PNM's administration of the fuel clause are effective and meet related requirements

New Jersey Board of Public Utilities

Jersey Central Power and Light Company
GPU Energy
Public Service Electric & Gas Company
Rockland Electric Company
Conectiv

Engagement Manager & Lead Consultant

- ◆ Electric system reliability
- ◆ Workforce management
- ◆ Transmission/distribution operations and maintenance

Engaged to assist Board of Public Utility (BPU) staff in reviewing and monitoring the implementation of recommendations resulting from an investigation of New Jersey's electric utilities' system reliability. Assisted BPU staff in the review and investigation of the information supplied by each of New Jersey's four electric utilities, in connection with the implementation of the selected recommendations as ordered by the Board. Particular emphasis was placed on each utility's activities to improve and/or maintain CAIDI and SAIDI indicators at acceptable levels. In particular, issues regarding utilities work force management, electric system distribution planning and engineering practices, transmission and substation maintenance practices and procedures were addressed during our investigations. Worked closely with and at the direction of the BPU staff in reviewing the implementation of the recommendations.

AEP/Kentucky

Project Manager & Lead Consultant

- ◆ Asset management
- ◆ Engineering and construction
- ◆ Transmission and distribution operations
- ◆ Vegetation management

Performed an assessment of the reliability of service within AEP/Kentucky's distribution system in its Hazard service territory (a forested mountainous terrain), which has historically experienced a greater number of electric service interruptions than other AEP/Kentucky service areas and, additionally, these interruptions have tended to be longer in duration.



Kingsport Power Company*Engagement Manager and Lead Consultant*

- ◆ Electric operations and distribution
- ◆ Executive management and human resources
- ◆ Cost allocation
- ◆ Information technology

Performed a comprehensive management and operations review which focused on executive management and human resources, electric operations (transmission, distribution, and substation) and information technology. Reviewed activities performed at Kingsport Power Company and its affiliate, Appalachian Power Company (in Virginia) and American Electric Power Service Corporation (in Ohio).

Pennsylvania Power & Light Company*Engagement/Project Manager and Lead Consultant*

- ◆ Executive management and organization
- ◆ Strategic planning
- ◆ Power production
- ◆ Fuels management
- ◆ Transmission and distribution
- ◆ Engineering and construction

Performed a management and operations review of all areas of PP&L's operations. This study included an in-depth investigation of affirmative action/EEO programs; salaries, wages, and benefits; staffing plans and levels; corporate-wide information technology; power plant materials management; nuclear de-commissioning; competitive position of in-house construction and maintenance work forces; and others. Total estimated annual and one-time savings and/or increased efficiency associated with recommendations were in excess of \$70 million (annual) and \$40 million (one-time).

PECO Energy Company*Project Manager and Lead Consultant*

- ◆ Project planning/scheduling
- ◆ Data and statistics research and benchmarking analysis
- ◆ Executive management
- ◆ Gas supply
- ◆ Electric/gas operations/reliability
- ◆ Emergency response
- ◆ GIS
- ◆ Corporate governance
- ◆ Customer service
- ◆ Shareholder proposals
- ◆ Merger agreement review

Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including both electric and gas operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

1935 Public Utility Holding Company*Lead Consultant*

- ◆ Affiliate relationships and transactions
- ◆ Cost allocation

Performed a review of charges associated with the services provided by a services company to its affiliates. The review was to determine whether the services were reasonable, necessary, and non-duplicative and to assess if charges were calculated in compliance with appropriate allocation formulae.

Central Maine Power Company*Lead Consultant and Expert Witness*

- ◆ Organizational structure/management and staffing
- ◆ Electric operations
- ◆ Customer service operations
- ◆ Management efficiency and cost control

Performed a focused management and operations review evaluating organizational structure/ management/staffing, executive compensation, customer service operations, and management efficiency and cost controls.

Ohio Power Company**Columbus Southern Power Company***Engagement/Project Manager*

- ◆ Fuel procurement
- ◆ Strategic planning
- ◆ Purchasing
- ◆ Marketing

Conducted a review of electric fuel procurement practices and procedures of two AEP subsidiary companies. Analyzed affiliated mines (surface and deep mines) and fuel procurement planning, long-term contracts, and spot procurement. Made recommendations on strategic planning, purchasing policies, and marketing programs.

<p>West Texas Utilities Company <i>Engagement/Project Manager and Lead Consultant</i></p> <ul style="list-style-type: none">◆ Executive management and organization◆ Electric operations◆ Power generation	<p>Performed a management and operations review involving all operations functions and the company's relationship with its parent company, CSW. Investigated the areas of executive management and organization, electric operations, and power generation.</p>
<p>Wisconsin Electric Power Company's Pleasant Prairie Unit 1 <i>Engagement/Project Manager and Expert Witness</i></p> <ul style="list-style-type: none">◆ Analysis of construction costs	<p>Reviewed and evaluated cost overruns and testified in support of findings at rate proceeding. Testimony resulted in a WPSC order to remove \$5 million from WEPCO's rate base request for the Pleasant Prairie project.</p>
<p>Georgia Power Company <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Field station organization◆ Operations and maintenance◆ Power generation	<p>Reviewed power generation and fuels management. Assessed Hatch nuclear generating station organization, operations and maintenance, hydro generation, and several fossil generating stations, including Bowen (3200 Mw).</p>
<p>Nebraska Public Power District <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Engineering and construction◆ Transmission and distribution	<p>Performed a focused management and operations review encompassing all electric generation activities, including fossil engineering and construction, fossil generation, electric transmission and distribution, operations and maintenance, and customer service operations.</p>
<p>New Orleans Public Service Corporation <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Fossil generation◆ Transmission and distribution operations and maintenance	<p>Performed a focused management and operations review that encompassed all electric generation activities, including fossil generation, electric transmission and distribution, operations and maintenance, and customer service operations.</p>
<p>Columbus Southern Power Company <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Engineering and construction◆ Transmission and distribution	<p>Performed a focused management and operations review of electric transmission and distribution as well as engineering and construction.</p>
<p>Union Light, Heat and Power Company <i>Engagement/Project Manager and Lead Consultant</i></p> <ul style="list-style-type: none">◆ Organization and management◆ Electric and gas operations◆ Strategic and corporate planning◆ Legal services	<p>Conducted a management and operations review of the Kentucky division of Cincinnati Gas & Electric Company. Led the investigation of organization and management, strategic and corporate planning, electric and gas operations, and management and legal services.</p>
<p>Toledo Edison Company Cleveland Electric Illuminating Company National Gas and Oil Corporation Cincinnati Gas and Electric Company <i>Lead Consultant and Expert Witness</i></p> <ul style="list-style-type: none">◆ Fossil and nuclear fuel procurement◆ System dispatch and power purchase◆ Power plant performance	<p>Conducted performance reviews of the fuel procurement policies and practices. These assessments included fossil and nuclear fuel procurement, system dispatch and purchase power, and power plant performance.</p>



Gas Utility Assignments

Equitable Gas Company*Project Manager & Executive Consultant I*

- ◆ Project planning and scheduling
- ◆ Gas supply and operations
- ◆ System reliability performance and related operations
- ◆ Customer service, billing, and collection functions

Performed a stratified management and operations audit of Equitable Gas Company (EGC), a subsidiary of EQT Corporation, and its relationship with its affiliates. The primary focus of this management and operations audit are the business components of EGC that are still subject to regulation by the Pennsylvania Public Utility Commission, specifically EGC service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. The objectives include the determination of what improvements, if any, can be accomplished in the management and operations of EGC pursuant to Section 522(b) of the Public Utility Code 66 Pa. C.S. §522(b). Specifically, Schumaker & Company looked for economies, efficiencies, or improvements which benefit EGC and its ratepayers. In doing so, Schumaker & Company identifies which, if any, economically practical opportunities for cost saving measures and/or better service can be instituted.

Philadelphia Gas Works*Project Manager & Executive Consultant I*

- ◆ Project planning and scheduling
- ◆ Gas supply
- ◆ System reliability performance and related operations
- ◆ Customer service, billing, and collection functions

Performed a stratified management and operations audit of Philadelphia Gas Works (PGW). The primary focus of this management and operations audit is to review those PGW business components subject to regulation by the PaPUC, specifically PGW service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of, efficiencies, or improvements which benefit PGW and its ratepayers. In doing so, Schumaker & Company identified which, if any, economically practical opportunities for cost saving measures can be instituted.

PECO Energy Company*Project Manager and Lead Consultant*

- ◆ Project planning/scheduling
- ◆ Data and statistics research and benchmarking analysis
- ◆ Executive management
- ◆ Gas supply
- ◆ Electric/gas operations/reliability
- ◆ Customer service & emergency response
- ◆ GIS
- ◆ Corporate governance
- ◆ Shareholder proposals
- ◆ Merger agreement review

Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including both electric and gas operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Elizabethtown Gas Company***NUI Corporation******New Jersey Natural Gas Company******New Jersey Resources Corporation******South Jersey Gas Company******South Jersey Industries Corporation****Engagement Manager & Lead Consultant*

- ◆ Restructuring
- ◆ Affiliate relations
- ◆ Competitive services
- ◆ Code of conduct

Conducted compliance audits of the competitive services of New Jersey's gas utilities; specifically South Jersey Gas Company (South Jersey Industries Corporation), New Jersey Natural Gas Company (New Jersey Resources Corporation), and Elizabethtown Gas Company (NUI Corporation) as a part of the utility industry restructuring in New Jersey. The purpose of these audits was to ensure that the utilities or their related competitive business segments do not have an unfair competitive advantage over other, non-affiliated purveyors of competitive services, and to evaluate and review the allocation of costs between the utilities' competitive and non-competitive services.

<p>Philadelphia Gas Works <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Evaluation of implementation of earlier management audit	<p>Performed a follow-up review approximately two years after the completion of a management and operations review, in which he completed the following:</p> <ul style="list-style-type: none">◆ Reviewed results of the additional studies recommended during the management audit◆ Developed a request for proposal for long-term strategic options
<p>Western Kentucky Gas Company <i>Engagement/Project Manager and Lead Consultant</i></p> <ul style="list-style-type: none">◆ Executive management and organization◆ Gas operations◆ Affiliated relationships and transactions	<p>Performed a management and operations review of all company operations, administrative functions, and relations between WKG and its parent company, ATMOS. Significant emphasis was placed on customer service, gas operations, and organization and management changes following the recent acquisition of WKG by ATMOS.</p>
<p>Philadelphia Gas Works <i>Project Manager and Lead Consultant</i></p> <ul style="list-style-type: none">◆ Executive management and organization◆ Gas operations◆ Customer services and customer relations	<p>Performed a management and operations review of this city-owned entity. Investigated executive management and its relations with customers and various political entities. Study was conducted amidst a highly charged (political) environment surrounding all interaction between the Commission and the Gas Works.</p>
<p>Baltimore Gas & Electric Company Columbia of Maryland Inc. Washington Gas Light Company <i>Engagement/Project Manager and Lead Consultant</i></p> <ul style="list-style-type: none">◆ Gas purchasing practices	<p>Reviewed and evaluated purchasing practices of three natural gas utilities for the Maryland Public Service Commission. In addition, he developed training materials and conducted a training program for commission staff personnel, thereby allowing them to continue the annual review and assessment of the natural gas plans submitted by each company.</p>
<p>Peoples Natural Gas Company <i>Project Manager</i></p> <ul style="list-style-type: none">◆ Organization and executive management◆ Human resources◆ Corporate planning◆ Legal services◆ Compensation and staffing◆ Allocation of fees	<p>Performed a management and operations review in which he investigated the areas of organization and executive management, human resources, corporate planning, legal services, compensation and staffing, and allocation of fees.</p>
<p>Southern California Gas Company <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Meter shop operations	<p>Conducted a management and operations review of one of the largest meter shop facilities in the country.</p>



Commission Assignments

Michigan Public Service Commission*Project Lead & Senior Consultant*

- ◆ Public Act 286 Section 11 verification involving rate cases
- ◆ Multiple electric company reviews

Assisted the Regulated Energy Division of the Michigan Public Service Commission by verifying that the requirements of Section 11, Public Act No. 286 of 2008 are being satisfied beginning with rate case orders issued after January 1, 2009 for each electric utility in the state, including Detroit Edison, Consumers Energy, Upper Peninsula Power Company, Wisconsin Electric Power Company, Alpena Power Company, and Indiana Michigan Power. Regulated energy utilities file rate cases with the Commission for approval. The Commission issues an order after reviewing the testimony and exhibits of the utility, interveners and the Commission staff. Subsection (1) of Section 11 of PA 286 requires the Commission to phase in electric rates equal to the cost of providing service to each customer class over a period of five years from the effective date of this act unless an exception is met. Therefore, for each regulated electric utility with more than one million retail customers (Consumers Energy and Detroit Edison), the MPSC is phasing in electric rates equal to the cost of providing service to each customer class before October 2013. For each regulated electric utility with less than one million retail customers (all others in Michigan), as mentioned in Subsection (2) as an exception, the phase-in period for cost-of-service rates can exceed five years.

Illinois Commerce Commission*Engagement Manager and Senior Consultant*

- ◆ Customer satisfaction survey design
- ◆ Training manual in survey implementation
- ◆ Survey implementation training workshops

Designed survey to measure customer satisfaction with electric service reliability/quality, clarity of billing, rates, and services, and provided an Electric Service Customer Satisfaction Survey Manual to instruct electric service providers how to administer the survey and understand, interpret, and present its results.

Arkansas Public Service Commission*Lead Consultant*

- ◆ Project management training

Provided training to the APSC staff on how to proceed with the monitoring and control of a management and operations review. Prepared both written and oral reviews of the proposal and detailed work plan from the consultant team. Schumaker & Company also assisted the APSC in managing the review conducted by the outside consultant team.

Water/Wastewater Utility Assignments

Tennessee-American Water Company

Senior Consultant

- ◆ Affiliate relationships
- ◆ Management effectiveness and cost competitiveness
- ◆ Communications and planning

Performed an affiliate audit of Tennessee-American Water Company (TAWC) at the request of the Tennessee Regulatory Authority (TRA). The audit included an investigation and assessment of the American Water Works Service Company management performance and decisions relating to internal processes and internal controls involving affiliate relationships and transactions, and the resulting recommendations of any management process changes needed for those controls and implementation. Further, the audit evaluated the charges allocated to TAWC, including the efficiency of processes and/or functions performed on behalf of TAWC, as well as the accuracy and reasonableness of the allocation factors utilized.

Water Services Corporation of South Carolina

Engagement Manager & Lead Consultant

- ◆ Project planning and scheduling
- ◆ Analytical discipline
- ◆ Planning concepts and practices
- ◆ Organization design
- ◆ Customer service
- ◆ Water operations
- ◆ Pricing strategies
- ◆ Technology tools and training

Performed a management and operations review and assessment of Water Services Corporation (WSC) of South Carolina for the State of South Carolina Office of Regulatory Staff (ORS) with specific focus on the operations of the five subsidiary water and wastewater companies that operate in South Carolina:

- ◆ Carolina Water Service, Inc. (CWS)
- ◆ Tega Cay Water Service, Inc. (TCWS)
- ◆ Utilities Services of South Carolina, Inc. (USSC)
- ◆ Southland Utilities, Inc. (SU)
- ◆ United Utility Companies, Inc. (UUC)

The bottom line of this project was to determine whether the rates charged to the South Carolina ratepayers can be reduced through the implementation of greater efficiencies in organizations, operations, or both. Additionally, another relevant analysis was a determination of whether the ratepayers of South Carolina were being properly and economically served by the range of corporate services that are provided to the WSC operations in South Carolina by the managers located in both West Columbia and Northbrook. Significant consideration was given to investigation of the potential benefits that would result from the consolidation or merger of WSC's affiliated companies.

Pennsylvania-American Water Company

Executive Consultant I

- ◆ Water operations
- ◆ Customer service, billing, and collection functions
- ◆ Operational performance

Performed a stratified management and operations audit of Pennsylvania-American Water Company (PAWC) for the Pennsylvania Public Utility Commission (PaPUC) with the primary focus areas being costs borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses are of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Philadelphia Suburban Water Company

Engagement/Project Manager and Lead Consultant

- ◆ Customer services
- ◆ Engineering and construction
- ◆ Operations and maintenance
- ◆ Cost allocation
- ◆ Capacity planning

Performed a management and operations review of all company functions, giving specific emphasis to staffing and compensation levels, management information systems, allocation of fees from affiliated companies, customer services, engineering and construction, operations and maintenance, water purchase agreements, and capacity planning.

United Water New Jersey*Lead Consultant*

- ◆ Customer services
- ◆ Cost allocation

Performed a comprehensive management audit in which the area of customer services was analyzed, including telephone center operations, credit and collections, meter reading, meter investigators, and the meter shop.

General Waterworks Corporation of Pine Bluff*Engagement/Project Manager and Lead Consultant*

- ◆ Affiliated relationships and transaction
- ◆ Water operations
- ◆ Customer service

Performed a management and operations review focused on affiliate relationships, water operations, customer services, and financial management. His final report was submitted as testimony in a general rate hearing of General Waterworks Corporation of Pine Bluffs.

Kentucky-American Water Company*Engagement/Project Manager and Lead Consultant*

- ◆ Executive management
- ◆ Corporate planning

Performed a management and operations review of all functions within the company and the relationships with its parent company and affiliates. Investigated the areas of executive management and corporate planning.

Mr. Lee E. Burgess Principal Consultant

Background

Mr. Lee Burgess, a Schumaker & Company associate, has more than 26 years of consulting experience to the utilities and regulatory industry. He was previously a Senior Associate with Theodore Barry & Associates for five years, a Partner of Metzler & Associates for over 10 years, President of L. E. Burgess Consultants, Inc. for six years, and was most recently Vice President of Operations for Navigant Consulting, Inc. He also served for five years as a US Navy Line Officer where he saw combat duty in Vietnam and gained broad-based experience in engineering, maintenance and materials management, shipyard construction, personnel, and administration. He has testified as an Expert Witness on utility management before the New York Public Service Commission (NYPSC), the Connecticut Public Utilities Regulatory Authority, the Pennsylvania Public Utility Commission (PAPUC), the Missouri Public Service Commission (MPSC), the Florida Public Service Commission (FPSC) and the California Public Utilities Commission (CPUC).

Education & Certifications

Mr. Burgess holds a Master of Business Administration Degree from the University of Michigan and a Bachelor of Science Degree from the United States Naval Academy. He is also a Certified Practitioner of Inventory Management (CPIM).

Consulting Expertise

Mr. Burgess has worked on various consulting assignments for over 70 clients and has managed projects for over 40 clients. He has also participated in over 30 management audits. Through this broad-based experience, he has developed high level expertise in:

- ◆ Organizational effectiveness
- ◆ Strategic/business planning
- ◆ Workforce management
- ◆ Corporate performance improvement
- ◆ Ethics
- ◆ Corporate governance
- ◆ Internal controls
- ◆ Transmission and distribution
- ◆ Customer operations
- ◆ Risk Management
- ◆ Engineering and construction
- ◆ Power plant maintenance and operations
- ◆ Fuels management
- ◆ Supply chain management
- ◆ Affiliate relations and transactions

Project Management Experience

Mr. Burgess has considerable experience in managing a wide range of consulting projects. The size and complexity of these projects have ranged from small, single issue evaluations for small utilities, to comprehensive reviews of all company functions for the largest utilities in the industry. The following is a representative list of his consulting experience.

- ◆ *Alaska Energy Authority* – Review of construction programs
- ◆ *Atlanta Gas Light Company* – Review of gas supply and planning
- ◆ *Atlantic Electric Company* (two audits) – Comprehensive reviews of all company functions
- ◆ *Avatar Utilities, Inc.* – Review of affiliate relations between the holding company, service companies, and water utilities; testified in two state jurisdictions on the results
- ◆ *The Brooklyn Union Gas Company* – Review of organization, strategic/business planning, manpower planning, marketing, equal employment opportunity/affirmative action, engineering and construction, system planning, capital budgeting, computer information systems, gas supply, ethics and internal control, and customer operations
- ◆ *Cincinnati Gas & Electric Company* (two audits) – Reviews of gas supply/planning
- ◆ *Commonwealth Edison Company* – Comprehensive review of all company functions for the Illinois Commerce Commission, subsequently managed a follow-up review of fossil fuel management
- ◆ *Commonwealth Utilities Corporation* (Saipan, Northern Marianas) – Comprehensive review of all utility functions of this remote island utility for U.S. Department of Interior



- ◆ *Connecticut Light & Power* – Review of all utility functions related to their gas business. Review of purchasing and materials management, internal auditing, and customer operations
- ◆ *Connecticut National Gas Corporation* – Review of all company functions
- ◆ *Dayton Power & Light Company* – Review of fossil fuel management
- ◆ *East Ohio Gas Company* – Review of gas supply
- ◆ *Entergy Corporation* – Assisted utility in organizing non-regulated business and establishing affiliated relationships between regulated and non-regulated businesses
- ◆ *Houston Light & Power Company/Central Power & Light Company* – Review of a major outage of the South Texas Project (Nuclear Generating Station), which was conducted for the Public Utility Commission of Texas
- ◆ *Illinois Power Company* – Implemented a construction management/productivity improvement program at the Clinton Nuclear Generating Station
- ◆ *Isham, Lincoln & Beale* – Litigation support reviewing the coal procurement practices of Commonwealth Edison Company
- ◆ *Kansas City Power & Light Company* – Review of purchasing and materials management practices
- ◆ *Long Island Lighting Company* – Review of organization, strategic/business planning, manpower planning, integrated resource planning, computer information services, capitol budgeting, engineering and construction, equal employment opportunity/affirmative action
- ◆ *Los Angeles Department of Water & Power* – Review of all department functions, which was conducted for the Board of Water & Power
- ◆ *Madison Gas & Electric Company* – Implementation of a productivity/work force management program for the Electric Transmission and Distribution Department
- ◆ *Naperville (Illinois) Electric Department* – Review of all department functions, which was conducted for the mayor of Naperville
- ◆ *Niagara Mohawk Power Corporation* – Review of organization, strategic/business planning, manpower planning, engineering and construction, capital budgeting, system planning, environmental management, electric T&D reliability, customer operations, equal employment opportunity/affirmative action, marketing, and gas supply; review of purchasing and materials management
- ◆ *Ohio Gas Company* – Review of gas supply and planning
- ◆ *Omaha Public Power District* – Review of District's materials management Orange & Rockland Utilities, Inc. – Comprehensive review of all electric company functions
- ◆ *Pacific Gas & Electric Company* – Review of affiliated relations between regulated and non-regulated businesses
- ◆ *The Peoples Gas Light & Coke Company/North Shore Gas Company* – Comprehensive review of all company functions, which was conducted for the Illinois Commerce Commission
- ◆ *Philadelphia Electric Company* – Retrospective audit of the construction of the Limerick 2 Nuclear Generating Station, which was conducted for the Pennsylvania Public Utilities Commission; testified as an expert witness at regulatory hearings
- ◆ *Public Service Electric & Gas Company* – Comprehensive review of all company functions, which was conducted for the New Jersey Board of Regulatory Commissioners
- ◆ *Rochester Gas & Electric Company* – Comprehensive review of all company functions, which was conducted for the New York Public Service Commission
- ◆ *San Diego Gas & Electric Company/Southern California Edison Company* – Conducted an investigation into the management of construction of the Pipeline Expansion Project (Canada to Southern California) built by Pacific Gas & Electric Company
- ◆ *Southern California Edison Company* – Review of affiliate relations between regulated and non-regulated businesses
- ◆ *Toledo Edison Company* – Review of fossil fuel supply

Government Experience

Public/regulatory agency clients include:

- ◆ California Public Utilities Commission
- ◆ Connecticut Public Utilities Regulatory Authority
- ◆ Georgia Public Service Commission
- ◆ Illinois Commerce Commission
- ◆ Kentucky Public Service Commission
- ◆ New Jersey Board of Regulatory Commissioners
- ◆ New Jersey Board of Public Utilities
- ◆ New York Department of Public Service
- ◆ Pennsylvania Public Utility Commission
- ◆ Public Utilities Commission of Ohio
- ◆ Public Utility Commission of Texas
- ◆ U.S. Department of the Interior

Utility and Telecommunications Experience

Additionally, he has performed other reviews for firms, including:

- ◆ Alaska Energy Authority
- ◆ Arkansas Power and Light Company
- ◆ Atlanta Gas Light Company
- ◆ Atlantic Electric Company
- ◆ Avatar Utilities Incorporated
- ◆ Baker & Botts (Houston Lighting and Power Company)
- ◆ The Brooklyn Union Gas Company
- ◆ Carolina Power and Light Company
- ◆ Central Power & Light Company
- ◆ Cincinnati Gas and Electric Company
- ◆ Clay Electric Cooperative
- ◆ Commonwealth Edison Company
- ◆ Commonwealth Utilities Corporation (Saipan, Northern Marianas)
- ◆ Connecticut Light and Power Company
- ◆ Connecticut Natural Gas Corporation
- ◆ Consumers Power Company
- ◆ East Ohio Gas Company
- ◆ Entergy Corporation
- ◆ Equitable Gas Company
- ◆ Florida Cities Water Company
- ◆ General Public Utilities Company
- ◆ Georgia Power Company
- ◆ Gulf States Utilities Company
- ◆ Houston Lighting and Power Company
- ◆ Illinois Bell Telephone Company
- ◆ Illinois Power Company
- ◆ Isham, Lincoln & Beale (Commonwealth Edison Company)
- ◆ Jersey Central Power & Light
- ◆ Kansas City Power & Light Company
- ◆ Kentucky Utilities Company
- ◆ KLT, Inc.
- ◆ Lagoven, S. A. (Venezuela)
- ◆ Lakeland Dept of Electric & Water Utilities (FL)
- ◆ Lincoln Electric System (Nebraska)
- ◆ Long Island Lighting Company
- ◆ Los Angeles Department of Water and Power
- ◆ Louisville Gas and Electric Company
- ◆ Madison Gas and Electric Company
- ◆ Missouri Cities Water Company
- ◆ Naperville Electric Department (Illinois)
- ◆ Nebraska Public Power District
- ◆ New York State Electric and Gas Corporation
- ◆ Niagara Mohawk Power Corporation
- ◆ Northeast Utilities
- ◆ Ohio Gas Company
- ◆ Oklahoma Gas and Electric Company
- ◆ Omaha Public Power District
- ◆ Orange & Rockland Utilities, Inc.
- ◆ Pacific Gas & Electric Company
- ◆ PECO Energy Company
- ◆ Pennsylvania-American Water Company
- ◆ Peoples Gas Light and Coke Company/North Shore Gas Company, The
- ◆ Philadelphia Electric Company
- ◆ Philadelphia Gas Works
- ◆ Public Service Company of New Mexico
- ◆ Public Service Electric and Gas Company
- ◆ Rochester Gas and Electric Corporation
- ◆ San Diego Gas & Electric Company
- ◆ Southern California Edison Company
- ◆ System Energy Resources, Incorporated
- ◆ Tennessee Valley Authority
- ◆ Texas Utilities
- ◆ Todd Shipyards (San Diego and Seattle)
- ◆ Toledo Edison Company
- ◆ Tucson Electric Power Company
- ◆ UGI Utilities, Inc.
- ◆ U.S. Navy
- ◆ Wisconsin Electric Power Company



Consulting Experience

Utility Management & Operations Audit Experience

Mr. Burgess is one of the foremost authorities in conducting management audits of electric, gas, telephone, and water/wastewater utilities. He has participated in 39 management audits over the past 19 years, most as a Project Manager and Lead Consultant. His management audit experience includes the following organizations:

- ◆ Arkansas Power & Light Company
- ◆ Atlanta Gas Light Company
- ◆ Atlantic Electric Company (two audits)
- ◆ The Brooklyn Union Gas Company
- ◆ Cincinnati Gas & Electric Company (three audits)
- ◆ Commonwealth Edison Company
- ◆ Commonwealth Utilities Corporation
- ◆ Connecticut Light and Power Company (two audits)
- ◆ Connecticut National Gas Corporation
- ◆ Dayton Power & Light Company (three audits)
- ◆ East Ohio Gas Company (two audits)
- ◆ Equitable Gas Company
- ◆ Georgia Power Company
- ◆ Houston Lighting and Power Company
- ◆ Illinois Bell Telephone Company
- ◆ Jersey Central Power & Light
- ◆ Kentucky Utilities Company
- ◆ Lakeland Department of Electric and Water & Utilities (Florida)
- ◆ Long Island Lighting Company
- ◆ Los Angeles Department of Water & Power
- ◆ Louisville Gas & Electric Company
- ◆ Madison Gas & Electric Company
- ◆ Naperville Electric Department (Illinois)
- ◆ Nebraska Public Power District
- ◆ New York State Electric & Gas Corporation
- ◆ Niagara Mohawk Power Corporation
- ◆ Ohio Gas Company
- ◆ Oklahoma Gas & Electric Company
- ◆ Orange & Rockland Utilities, Inc.
- ◆ Pacific Gas & Electric Company
- ◆ PECO Energy Company
- ◆ Pennsylvania-American Water Company
- ◆ Peoples Gas Light & Coke Company/North Shore Gas Company, The
- ◆ Philadelphia Electric Company
- ◆ Philadelphia Gas Works
- ◆ Public Service Electric & Gas Company
- ◆ Rochester Gas & Electric Company
- ◆ Southern California Edison Company
- ◆ Toledo Edison Company
- ◆ Wisconsin Electric Power Company

Litigation and Testimony Experience

- ◆ *California Public Utilities Commission* – Presented direct testimony on a comprehensive investigation into the management, costs, and cost allocations regarding PG&E Enterprises construction of the Pipeline Expansion Project
- ◆ *Florida Public Service Commission* – Presented testimony in a rate case hearing on affiliate relations and cost allocations of Avatar Utilities and Florida Water Company
- ◆ *Missouri Public Service Commission* – Presented testimony in a rate case hearing on affiliate relations and cost allocations of Avatar Utilities and Missouri Cities Water Company
- ◆ *Pennsylvania Public Utility Commission* – Presented testimony in the rate case hearing regarding a retrospective construction management audit of Philadelphia Electric Company's Limerick Unit 2; testimony specifically concerned project management of Limerick 2's construction, which included PECO Energy Company's executive management oversight, and the management and conduct of the audit
- ◆ *Connecticut Public Utilities Regulatory Authority* – Testified regarding management audit approach and quantification methodologies (1988)
- ◆ *State of New York Department of Public Service* – Presented testimony regarding productivity, construction management, and quantification methodologies in the prudence audit of Shoreham Nuclear Generating Station (1982)
- ◆ *Trans Alaska Pipeline System – Support Consultant* in the area of construction project management for Ragovin, Hugh, & Lenzner in a rate case/litigation involving prudence issues related to the project

Organization Effectiveness, Strategic/Business Planning, and Corporate Performance Experience

Mr. Burgess has performed numerous evaluations of utility organizational effectiveness as well as strategic planning, business planning, and the measurement of corporate performance. There are many ways to measure the effectiveness of an organization, including different criteria from productivity, profits, growth, turnover, stability and cohesion. Different

theoretical perspectives can account for the diversity in usage of effectiveness measurements. Some perspectives:

- ◆ Emphasize goal attainment and focus on output variables such as quality, productivity, and efficiency.
- ◆ Focus on the support goals of the organization such as participant satisfaction, morale, interpersonal skills, etc.
- ◆ Focus on the exchanges with the environment – this includes information processing, profitability, flexibility, adaptability

Mr. Burgess has performed these assignments and, in addition, for KTL, Inc. he developed and wrote the first strategic plan for the non-regulated companies of Kansas City Power and Light Company, which was conducted a seminar for senior management on strategic planning.

Atlantic Electric Company
The Brooklyn Union Gas Company
Commonwealth Edison Company
Commonwealth Utilities Corporation
Connecticut Light and Power Company
Connecticut National Gas Corporation
Equitable Gas Company
Illinois Bell Telephone Company
Jersey Central Power & Light

KTL, Inc
Long Island Lighting Company
Los Angeles Department of Water & Power
Niagara Mohawk Power Corporation
Philadelphia Electric Company
Philadelphia Gas Works
Pennsylvania-American Water Company
PECO Energy Company
The Peoples Gas & Light Company/North Shore Gas Company

Ethics and Internal Controls Experience

Mr. Burgess has conducted ethics programs and internal control reviews to verify they are designed to provide reasonable assurance regarding the achievement of objectives in the following categories:

- ◆ Effectiveness and efficiency of operations
- ◆ Reliability of financial reporting
- ◆ Compliance with applicable laws and regulations

Specifically he conducted an in depth review of the internal audit department of Northeast Utilities, which included a review of company internal controls, for the Connecticut Public Utilities Regulatory Authority.

Corporate Culture, Management Structure, and Staffing Levels Experience

Mr. Burgess's expertise during management audits of utilities include reviewing any existing key performance indicators related to corporate culture and comparing what they are and have been for the for past five years. These need to be aligned with mainstream business objectives. His review of employee survey results and senior financial officer's code of ethics will also help identify the efficiency and effectiveness of compliance with applicable governmental laws, rules, and regulations and indicate whether employees are being treated appropriately.

One important key indicator Mr. Burgess researches is whether or not total management layers are minimized. Organizational structure and management processes should support effective communication up, down, and across the organization. Management information systems must provide timely, useful information at all levels for decision-making and control.

The overall organization of the various functions should be efficient and effective with clearly defined roles and responsibilities, staffing levels that are workload driven, and adequate consolidation of activities. The overall organization is geographically and functionally efficient, with clearly defined roles and responsibilities and effective consolidation of activities.

Corporate Governance and Risk Management Experience

Mr. Burgess has performed complete reviews of several utilities' governance policies, practices and procedures, and adherence to the Sarbanes-Oxley Act of 2002. These assessments determined, as applied to any unique circumstances, whether the utilities were implementing good corporate governance practices. Issues included the following subject areas:

- ◆ The Board of Directors' (Board) organization, board committees' and their duties, frequency of meetings, and director salary and fee structure
- ◆ The independence, backgrounds, and areas of expertise of the Board Audit Committee members, their interactions with internal/external audit functions, and their relationship to that of its parent company's Board and other affiliated companies
- ◆ The ethics and conflict of interest policies and enforcement, internal controls, reports and risk assessment methodology,



and any planned changes that may impact corporate governance

- ◆ Any policies related to the amount and type of non-audit services provided by the external audit firm and other audit firms, including the methodology used to approve this type of work.
- ◆ Implementation of Enterprise Risk Management policies and practices.

Affiliate Relationships Experience

Mr. Burgess has performed numerous assignments in evaluating the organization, process and procedures, and accounting controls that define the relationship between a utility's regulated and non-regulated business. He has performed these evaluations for state public service commission and helped utilities organize and establish non-regulated companies. Mr. Burgess has also evaluated the affiliate relationships between the regulated and non-regulated business, as part of a broader review of management practices.

The following are some recent consulting engagements that Mr. Burgess has conducted:

- ◆ *Entergy Corporation* – Assisted the utility in establishing the organization of its newly formed non-regulated businesses and established procedures to govern transactions between the regulated and non-regulated business
- ◆ *KLT, Inc.* – Developed the Strategic Plan of Kansas City Power and Light Company's non-regulated business to include affiliate relationships with the regulated parent company. Conducted a seminar for senior management on these relationships.
- ◆ *Avatar Utilities* – Conducted an in-depth review of the relationship between regulated water utilities (multi-state) and the non-regulated business. This review included costs allocations between regulated businesses operating in several state regulatory jurisdictions.
- ◆ *Southern California Edison/San Diego Gas & Electric Company* – Performed an in-depth investigation of the cost allocation charges between regulated and non-regulated businesses (as part of a larger rate investigation) of PG&E Enterprises and associated companies. Filed testimony of the results of the analysis.

Atlantic Electric Company
Avatar Utilities
Entergy Corporation
KTL, Inc

PGE/PGE Enterprises
Public Service Electric and Gas Company
SCE Corp
Southern California Edison/San Diego Gas & Electric Company

Shareholder Proposals Experience

Mr. Burgess has reviewed PECO Energy Company's pending or outstanding shareholder proposal(s) and assessed what impact the proposal(s) would have on their management, operations, and financial condition. In determining the potential impact of the proposals, he considers both quantitative and qualitative effects on the utility and their ratepayers.

Executive Management Experience

The executive management function is very critical to the overall success and viability of a utility. The decisions and initiatives undertaken within this functional area impact both short-term and long-term issues. As a result, it is imperative that appropriate managers are in place, that they have a clear set of directives from the Board of Directors translated into a carefully thought out strategic plans, and that proper management policy, procedures, and control systems are in place to ensure the continued effectiveness of operations.

Mr. Burgess has more than 24 years of consulting experience to the utility and regulatory industry. Those functional areas in which he has been a *Lead Consultant* include organizational effectiveness, strategic and business planning, and corporate performance. His most recent projects involved reviewing executive management, corporate governance, corporate culture, and external relations at PECO Energy Company, Pennsylvania-American Water Company and Philadelphia Gas Works for the Pennsylvania Public Utility Commission (PaPUC).

Commonwealth Edison Company
Equitable Gas Company
Jersey Central Power & Light
PECO Energy Company

Pennsylvania-American Water Company
Philadelphia Gas Works
The Peoples Gas & Light & Coke Company

Engineering & Construction Experience

Mr. Burgess has conducted reviews and implementation projects on all aspects of utility engineering and construction, including nuclear and fossil power plant construction, power plant modification and outage capitol work, and transmission and distribution systems. Utilities that Mr. Burgess has consulted with in the area of engineering and construction include those listed in the left-hand column.

Alaska Energy Authority	Gulf States Utilities	Tennessee Valley Authority
Arkansas Power & Light Company	Houston Lighting & Power Company	Texas Utilities
Atlantic Electric Company	Illinois Power Company	Tucson Electric Power Company
Carolina Power & Light Company	Kentucky Utilities Company	Wisconsin Electric Power Company
Commonwealth Edison Company	Louisville Gas & Electric Company	
Consumers Power Company	Rochester Gas & Electric Corporation	

Transmission and Distribution Experience

Upgrading investment in generation as well as in the construction of new transmission and distribution (T&D) facilities is critical for utilities since much of the existing infrastructure is operating beyond its life expectancy. Transmission failures are increasing and becoming a serious issue for senior management of utilities and regulators. Rising issues of reliability, therefore, are compelling utilities to prioritize infrastructure investment.

With Mr. Burgess's considerable and diverse experience in the area of T&D, he provides a comprehensive analysis of the major drivers and challenges facing operations, maintenance, outage planning, storm restoration and response, and right of way/tree trimming. His electrical T&D experience allows him to appraise the design and assist in quality projects that focus on the client's design criteria, philosophies, and standards.

Atlantic Electric Company	Los Angeles Department of Water & Power
Commonwealth Edison Company	Madison Gas and Electric Company
Commonwealth Utilities Corporation (Saipan, Northern Marianas)	Rochester Gas & Electric Company

Fossil Power Plant Experience

A fossil fuel power plant is a system of devices for the conversion of fossil fuel energy (such as coal, natural gas or petroleum (oil)) to mechanical work or electric energy. The main systems are the steam cycle and the gas turbine cycle.

Mr. Burgess has conducted numerous consulting engagements with utilities in the area of fossil power plant performance, maintenance, operations, and fuel supply. These projects include evaluations as well as implementation of management systems and include utilities in the left-hand column. He has been instrumental in the review and evaluation of developing and maintaining standards, recommended practices, and technical reports related to automation in fossil power generating stations.

Arkansas Power & Light Company	Lakeland Dept. of Electric & Water Utilities, FL	Omaha Public Power District
Atlantic Electric Company	Louisville Gas and Electric Company	Public Service Company of New Mexico
Commonwealth Edison Company	Madison Gas & Electric Company	Tucson Electric Power Company
General Public Utilities	Nebraska Public Power District	UGI Utilities, Inc
Georgia Power Company	New York State Electric & Gas Corporation	
Kentucky Utilities	Oklahoma Gas and Electric Company	

Supply Chain Management Experience

Mr. Burgess is a professionally *Certified Practitioner of Inventory Management* (CPIM) through the American Production and Inventory Control Society (APICS), and has been actively involved with developing the state of the art in purchasing and materials management practices in the utilities industry. His consulting results with clients have left them with improved strategy for managing all the resources that go toward meeting customer demand for their product or service. A big piece of planning is developing a set of metrics to monitor the supply chain so that it is efficient, costs less, and delivers high quality and value to customers.

Supply chain managers schedule the activities necessary for production, testing, packaging and preparation for delivery. This is the most metric-intensive portion of the supply chain—one where companies are able to measure quality levels, production output, and worker productivity. Supply chain planners have to create a responsive and flexible network for receiving defective and excess products back from their customers and supporting customers who have problems.

Mr. Burgess also performed reviews of purchasing and materials management practices and their impact on corporate functions for the following utilities:



- ◆ *Northeast Utilities* – Performed two in-depth reviews of purchasing and materials management, including MIS applications
- ◆ *Todd Shipyards (San Diego, California and Seattle, Washington)* – Performed a broad-based operations review of major shipbuilding support functions, which included procurement, inventory control, and material transportation and handling

Arkansas Power & Light	Lakeland Dept. of Electric & Water Utilities, FL
Atlantic Electric Company	Los Angeles Department of Water & Power
The Brooklyn Union Gas Company	Madison Gas & Electric Company
Commonwealth Edison Company	Naperville Electric Department
Commonwealth Utilities Corporation (Saipan, Northern Marianas)	Nebraska Public Power District
Connecticut Light & Power Company	Niagara Mohawk Power Corporation
Connecticut Material gas Corporation	Omaha Public Power District
Houston Lighting and Power Company (South Texas Project)	Orange & Rockland Utilities, Inc.
Illinois Power Company (Clinton Nuclear Generating Station Construction)	People Gas Light & Coke Company/North Shore Gas Co.
Kansas City Power & Light Company	Public Service Electric and Gas Company
Lagoven, S.A. (Venezuela)	Rochester Gas & Electric Company

Manpower Planning & Workforce Management Experience

Mr. Burgess has expertise in the area of manpower planning and work force management, having worked with many utilities (listed in the left-hand column) over the past 22 years on a wide variety of manpower planning and productivity issues. In addition to the client descriptions included with this resume, the following are further examples of Mr. Burgess's experience with workforce productivity systems and procedures:

- ◆ *Baker & Botts (Houston Light and Power Company)* – Performed litigation support advising HC&P's council of workforce productivity issues related to the construction of the South Texas Project (Nuclear Generating Station)
- ◆ *GPU Energy* – Evaluated workforce productivity systems and procedures for GPU's fossil power production. Evaluated the systems for all three GPU operating companies Pennsylvania Electric Company, Metropolitan Edison Company and Jersey Central Power and Light Company
- ◆ *Georgia Power Company* – Evaluated workforce management systems in the Nuclear and Fossil Power Restriction departments on a comprehensive management audit for the Georgia Public Service Commission
- ◆ *Gulf States Utilities Company* – Implemented a workforce productivity system at the construction site of the River Bend Nuclear Generating Station
- ◆ *Todd Shipyards (San Diego, California and Seattle, Washington)* – Performed a review of labor productivity and work management systems
- ◆ *Illinois Power Company* – Implemented a workforce productivity and methods improvement program at the construction site of the Clinton Nuclear Generating Station
- ◆ *Lakeland Department of Electric and Water Utilities* – Evaluated workforce productivity systems in the Power Generating Division
- ◆ *New York State Electric & Gas Corporation* – Evaluated workforce productivity systems at each of the corporation's fossil generating stations
- ◆ *Oklahoma Gas & Electric Company* – Evaluated workforce productivity systems at the company's fossil generating station
- ◆ *Omaha Public Power District* – Implemented workforce productivity systems at the North Omaha (fossil) and Fort Calhoun (nuclear) Generating Stations
- ◆ *Public Service Company New Mexico* – Implemented a workforce productivity system at the San Juan Generating Station
- ◆ *Tennessee Valley Authority* – Implemented a workforce productivity measuring system at the construction site of Hartsville Nuclear Generating Stations; subsequently developed a methods improvement program using the results of the earlier efforts
- ◆ *Texas Utilities* – Reviewed work management and productivity at the construction site of the Comanche Peak Nuclear Reach Generating Station; advised the company on workforce productivity issues in preparation for regulatory proceedings
- ◆ *State of Alaska* – Advised State attorneys on workforce productivity issues related to the construction of the Trans Alaska Pipeline System

- ◆ *New York Public Service Commission* – Conducted an investigation into the workforce management programs and workforce productivity in the construction of the Shoreham Nuclear Generating Station; testified as an expert witness on workforce productivity and the quantification of productivity

Baker & Botts (Houston Light and Power Company)
GPU Energy
Georgia Power Company
Gulf States Utilities Company
Illinois Power Company
Lagoven, S.A. (Venezuela)
Lakeland Department of Electric and Water Utilities
Madison Gas and Electric Company
New York Public Service Commission
New York State Electric & Gas Corporation

Nebraska Public Power District
Niagara Mohawk Power Corporation
Oklahoma Gas & Electric Company
Omaha Public Power District
Public Service Company New Mexico
State of Alaska
Tennessee Valley Authority
Texas Utilities
Todd Shipyards (San Diego, California and Seattle, Washington)

Nuclear Power Experience

Mr. Burgess has consulted on a wide range of projects involving utility nuclear generating stations. The following summarizes his experience in this area:

- ◆ *Project Manager* for management audits that included evaluations of nuclear plant operations, maintenance, and outage management:
 - Rochester Gas & Electric Corporation (Ginnae Station)
 - Omaha Public Power District (Fort Calhoun)
 - Tennessee Valley Authority (Watts Bar)
 - Arkansas Power & Light Company (Arkansas Nuclear One)
 - Nebraska Public Power District (Cooper)
 - Houston Light & Power Company (South Texas Project)
- ◆ *Lead Consultant* for the evaluation of nuclear operations, maintenance, and outage management for the following utilities (stations):
 - Georgia Power Company (Hatch)
 - Omaha Public Power District (Fort Calhoun)
 - Tennessee Valley Authority (Watts Bar)
 - Arkansas Power & Light Company (Arkansas Nuclear One)
 - Nebraska Public Power District (Cooper)
 - Texas Utilities (Commanche Peak)
- ◆ Implemented nuclear construction management programs for the following utilities (stations):
 - Tennessee Valley Authority (Hartsville)
 - Gulf States Utilities (River Bend)
 - Illinois Power Company (Clinton)
- ◆ Conducted a retrospective prudence investigation and testified in the areas of construction management and quantification of Long Island Lighting Company's Shoreham Nuclear Generating Station
- ◆ Conducted a retrospective prudence investigation and testified in the area of senior management oversight of Philadelphia Electric Company's Limerick II Nuclear Generating Station



Assignment Experience

The following pages contain Mr. Burgess's relevant client list.

Electric Utility Assignments

Jersey Central Power & Light

Executive Consultant I

- ◆ Executive management and corporate governance
- ◆ Organizational structure
- ◆ Strategic planning
- ◆ External relations
- ◆ Support services/risk management

Assisted the New Jersey Board of Public Utilities in an audit of the affiliated transactions between Jersey Central Power and Light Company and its affiliates, and a comprehensive management audit of Jersey Central Power and Light Company (JCP&L).

Schumaker & Company reviewed and assessed affiliate cost allocation methodologies to determine accounting and allocation procedures for separating the costs of inter-company transactions. Analysis determined if current accounting and allocation procedures were equitable, fair, and did not favor certain affiliates over JCP&L and its ratepayers. Additionally, examination assessed the electric generation policies, distribution policies, and assignment strategies of JCP&L and its affiliates. This audit included an examination of affiliate relationships and cost allocation methodologies, executive management and corporate governance, organization structure, human resources, strategic planning, finance, accounting and property records, cash management, procurement and purchasing of energy, distribution and operation management, extensions and upgrades to provide regulated services, clean energy, market conditions, contractor performance, customer service, external relations, support services, and a review of actions taken by JCP&L regarding prior audits..

PECO Energy Company

Lead Consultant

- ◆ Organization structure and planning
- ◆ Management communications and control
- ◆ Administrative procedures and control
- ◆ Strategic planning
- ◆ External relations
- ◆ Corporate governance
- ◆ Shareholders proposals
- ◆ Ethics and internal controls

Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including electric and gas operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place.

Mr. Burgess investigated the executive management, planning, external relations, and corporate governance functions, as well as corporate culture, management structure, and staffing levels with specific focus on the ethics programs and internal controls.

Atlantic Electric Company

Lead Consultant & Project Manager & Engagement Director

- ◆ Organization effectiveness
- ◆ Strategic/business planning
- ◆ Corporate performance
- ◆ Transmission and distribution
- ◆ Supply chain management
- ◆ Affiliate relationships
- ◆ Fossil power plant operations and maintenance
- ◆ Engineering and construction

Evaluated company organization, strategic/business planning, and corporate performance (to include non-regulated companies) as part of a comprehensive management audit of all company management and operations, which was conducted for the New Jersey Board of Regulatory Commissioners. Mr. Burgess also reviewed their purchasing and materials management practices. In addition, Mr. Burgess has also evaluated the affiliate relationships between the regulated and non-regulated business, as part of a broader review of management practices.

As *Project Manager* for two comprehensive management audits, Mr. Burgess provided analysis of transmission, distribution, storm restoration, tree trimming, and associated capital budgeting, planning, and support systems. He also consulted within the area of engineering and construction and fossil power plant performance.

Commonwealth Edison Company

Lead Consultant & Project Manager &
Engagement Director

- ◆ Organization effectiveness
- ◆ Strategic/business planning
- ◆ Corporate performance
- ◆ Transmission and distribution
- ◆ Supply chain management
- ◆ Fossil power plant
- ◆ Engineering and construction

Evaluated organization planning, strategic/business planning, and corporate performance as part of a comprehensive management audit of this multi-billion dollar electric utility, which was conducted for the Illinois Commerce Commission. Mr. Burgess also provided an evaluation of the purchasing and materials management functions of this multi-billion dollar corporation.

As *Project Manager* for a comprehensive management audit, Mr. Burgess provided analysis of transmission and distribution functions and coordinated a follow-up engineering study of Edison's transmission and distribution (T&D) system in response to a major storm outage. He also consulted within the area of engineering and construction and fossil power plant performance.

**Commonwealth Utilities Corporation
(Saipan, Northern Marianas)**

Lead Consultant & Engagement Director

- ◆ Organization effectiveness
- ◆ Strategic/business planning
- ◆ Corporate performance
- ◆ Transmission and distribution
- ◆ Supply chain management

Conducted a review of organization and all planning functions for these remote island utilities, which was conducted for the utility and the U.S. Department of Interior.

As *Project Manager* for a comprehensive review of this remote island utility, Mr. Burgess's scope included as analysis of practices and support systems for aging distribution lines in high vegetation areas, and performed reviews of purchasing and materials management practices and their impact on corporate functions.

Connecticut Light and Power Company

Lead Consultant & Project Manager &
Engagement Director

- ◆ Organization effectiveness
- ◆ Strategic/business planning
- ◆ Corporate performance

Evaluated organization and strategic planning as part of a diagnostic management review, which was conducted for the Connecticut Public Utilities Regulatory Authority.

Long Island Lighting Company

Lead Consultant & Project Manager &
Engagement Director

- ◆ Organization effectiveness
- ◆ Strategic/business planning
- ◆ Corporate performance
- ◆ Manpower planning and workforce management

Evaluated organization, strategic/business planning, and corporate performance as part of a focused management audit, which was conducted for the New York Public Service Commission. Included in the review of corporate perspective, he evaluated manpower planning systems.

Madison Gas and Electric Company

Project Manager

- ◆ Transmission and distribution
- ◆ Manpower planning and workforce management

Mr. Burgess has considerable and diverse experience in the area of transmission and distribution (T&D) operations, maintenance, outage planning, storm restoration and response, and right of way/tree trimming, including implementing a work force management program for the T&D department of Madison Gas and Electric Company. Scope included tree trimming and storm restoration.

**Public Service Electric and Gas
Company**

Lead Consultant & Engagement Director

- ◆ Supply chain management
- ◆ Affiliate relationships
- ◆ Organization
- ◆ Strategic Planning

Evaluated the Public Service Electric and Gas Company organization, strategic planning and purchasing and materials management function of this multi-billion dollar corporation.

Mr. Burgess also evaluated the affiliate relationships between the regulated and non-regulated business, as part of a broader review of management practices.



Niagara Mohawk Power Corporation*Engagement Director & Project Manager & Lead Consultant*

- ◆ Organization effectiveness
- ◆ Strategic/business planning
- ◆ Corporate performance
- ◆ Supply chain management
- ◆ Manpower planning and workforce management

As a *Lead Consultant*, Mr. Burgess evaluated organization, strategic/business planning, and corporate performance as part of a focused management audit, which was conducted for the New York Public Service Commission. Included in the review of corporate perspective, he evaluated manpower planning and work management systems.

As *Engagement Director* and *Project Manager* he evaluated the corporate, nuclear, and fossil purchasing departments and procedures. And as *Project Manager* and *Lead Consultant* he consulted on a follow-up process re-engineering effort for corporate-wide purchasing, contracting, and materials management.

Kansas City Power & Light Company*Project Manager & Lead Consultant*

- ◆ Supply chain management

Mr. Burgess was *Project Manager* and *Lead Consultant* on a comprehensive review of Kansas City Power & Light Company's purchasing and materials management functions.

Philadelphia Electric Company*Lead Consultant & Engagement Director*

- ◆ Organization effectiveness
- ◆ Strategic/business planning
- ◆ Corporate performance

Evaluated the senior management and construction management organization as it related to the construction of the Limerick II Nuclear Generating Station, which was conducted for the Pennsylvania Public Utility Commission; testified as an expert witness on these topics in regulatory hearings.

SCE Corp*Project Manager*

- ◆ Affiliate relationships

Performed as *Project Manager* for a comprehensive review of the affiliate relations between SCE Corp, Southern California Edison Company, and Mission Energy (non-regulated), which was performed for the California Public Utilities Commission.

Nebraska Public Power District*Consultant*

- ◆ Supply chain management
- ◆ Manpower planning and workforce management

Performed on a project to evaluate the need for a new materials management information system, assisted in justifying this expenditure, and helped implement the system.

In addition, Mr. Burgess evaluated workforce productivity systems at the District's fossil and nuclear generating stations.

Rochester Gas & Electric Company*Lead Consultant, Project Manager & Engagement Director*

- ◆ Transmission and distribution
- ◆ Supply chain management
- ◆ Engineering and Construction

As *Project Manager* for the Rochester Gas & Electric Company comprehensive audit, Mr. Burgess's analysis included all transmission and distribution (T&D) functions, purchasing and materials management, and associated support systems and practices. Engineering and construction issues included nuclear and fossil power plant construction and power plant modification and outage capitol work.

Mr. Burgess reviewed practices that would reduce overloading and alleviate congestion on existing power lines. This analysis helps identify emerging opportunities for revenue expansion in T&D services and helps participants devise strategies to meet the various challenges.

Gas Utility Assignments

Philadelphia Gas Works

Lead Consultant

- ◆ Organization structure/planning
- ◆ Management communications and control
- ◆ Administrative procedures and control
- ◆ Strategic planning
- ◆ External relations
- ◆ Human resources
- ◆ Corporate governance
- ◆ Ethics and internal controls

Performed a stratified management and operations audit of Philadelphia Gas Works (PGW). The primary focus of this management and operations audit is to review those PGW business components subject to regulation by the PaPUC, specifically PGW service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of, efficiencies, or improvements which benefit PGW and its ratepayers.

Mr. Burgess investigated the executive management, planning, external relations, and corporate governance functions with specific focus on the ethics programs and internal controls.

Equitable Gas Company

Lead Consultant

- ◆ Organization structure and planning
- ◆ Management communications and control
- ◆ Administrative procedures and control
- ◆ Strategic planning
- ◆ External relations
- ◆ Human resources
- ◆ Corporate governance
- ◆ Purchasing & Materials Management
- ◆ Transportation Management
- ◆ Real Estate & Facilities

Performed a stratified management and operations audit of Equitable Gas Company (EGC), a subsidiary of EQT Corporation, and its relationship with its affiliates. The primary focus of this management and operations audit are the business components of EGC that are still subject to regulation by the Pennsylvania Public Utility Commission, specifically EGC service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. The objectives include the determination of what improvements, if any, can be accomplished in the management and operations of EGC pursuant to Section 522(b) of the Public Utility Code 66 Pa. C.S. §522(b). Specifically, Schumaker & Company looked for economies, efficiencies, or improvements which benefit EGC and its ratepayers. In doing so, Schumaker & Company identifies which, if any, economically practical opportunities for cost saving measures and/or better service can be instituted.

PECO Energy Company

Lead Consultant

- ◆ Organization structure and planning
- ◆ Management communications and control
- ◆ Administrative procedures and control
- ◆ Strategic planning
- ◆ External relations
- ◆ Human resources
- ◆ Corporate governance
- ◆ Shareholders proposals
- ◆ Ethics and internal controls

Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including electric and gas operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place.

Mr. Burgess investigated the executive management, planning, external relations, and corporate governance functions, as well as corporate culture, management structure, and staffing levels with specific focus on the ethics programs and internal controls.

The Brooklyn Union Gas Company

Lead Consultant & Project Manager & Engagement Director

- ◆ Organization effectiveness
- ◆ Strategic/business planning
- ◆ Corporate performance
- ◆ Ethics and internal controls
- ◆ Supply chain management

Evaluated organization, strategic/business planning and corporate performance as part of a focused management audit, which was conducted for the New York Public Service Commission.

Mr. Burgess also conducted an in depth review of the company's ethics and internal control programs, including an analysis of the effectiveness of past company programs, and performed reviews of purchasing and materials management practices and their impact on corporate functions.



Connecticut National Gas Corporation*Lead Consultant & Project Manager & Engagement Director*

- ◆ Organization effectiveness
- ◆ Strategic/business planning
- ◆ Corporate performance

Evaluated organization and strategic planning as part of a diagnostic management review, which was conducted for the Connecticut Public Utilities Regulatory Authority.

The Peoples Gas & Light Company/North Shore Gas Company*Lead Consultant & Engagement Director*

- ◆ Organization effectiveness
- ◆ Strategic/business planning
- ◆ Corporate performance

Evaluated organization planning, strategic/business planning, and corporate performance as part of a comprehensive management audit of this multi-billion dollar gas utility, which was conducted for the Illinois Commerce Commission.

Water/Wastewater Utility Assignments

Pennsylvania-American Water Company

Lead Consultant

- ◆ Organization structure and planning
- ◆ Management communications and control
- ◆ Administrative procedures and control
- ◆ Strategic planning
- ◆ External relations
- ◆ Human resources
- ◆ Corporate governance
- ◆ Corporate culture
- ◆ Management structure
- ◆ Staffing levels
- ◆ Ethics and internal controls

Performed a stratified management and operations audit of Pennsylvania-American Water Company (PAWC) for the Pennsylvania Public Utility Commission (PaPUC) with the primary focus areas being costs borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses are of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Mr. Burgess investigated the executive management, planning, external relations, and corporate governance functions, as well as corporate culture, management structure, and staffing levels with specific focus on the ethics programs and internal controls.

Los Angeles Department of Water & Power

Lead Consultant & Project Manager & Engagement Director

- ◆ Organization effectiveness
- ◆ Strategic/business planning
- ◆ Corporate performance
- ◆ Transmission and distribution
- ◆ Supply chain management

Evaluated organization and strategic/business planning as part of a comprehensive review.

Mr. Burgess also consulted as *Project Manager* for a comprehensive audit that included analysis of all T&D functions and planning, budgeting, and outage management systems and practices, and reviewed purchasing and materials management practices and their impact on corporate functions.



Regulatory Agency and Other Assignments

Vermont Public Service Company*Engagement Director & Lead Consultant*

Conducted a review of the internal controls, ethics procedures, and Board of Director oversight for the Vermont Public Service Commission.

- ◆ Ethics and internal controls
- ◆ Corporate Governance

Lagoven, S.A. (Venezuela)*Consultant*

Performed a broad based manpower planning and operations review, which included improving purchasing and materials management functions for this major international oil company with delivered products.

- ◆ Supply chain management
- ◆ Manpower planning and workforce management

PGE/PGE Enterprises*Project Manager*

Performed as *Project Manager* for a comprehensive review of the affiliate relations between PGE and PGE Enterprise, which was performed for the California Public Utilities Commission.

- ◆ Affiliate relationships

Mr. Eugene N. Johnson, PE Senior Technical Consultant

Background

Mr. Eugene N. Johnson, a Schumaker & Company associate, brings 40 plus years of utility experience with knowledge of distribution asset management; work management; operations improvement; geographical information system (GIS); design; maintenance and operations; budgeting; reliability improvement; restoration; and decision support information systems.

With many years of business management and engineering industry experience, Mr. Johnson has demonstrated his strategic thinking amid demonstrated line management and internal consulting experience. With a bias for action and strong analytical skills developed through leadership of and participation in numerous operation improvement teams, Mr. Johnson's excellent project and budget management talents have contributed to numerous successful projects on time and within budget.

As principal of Cornerstone Consulting Firm, LLC, Mr. Johnson recently assisted American Electric Power in recasting a key portion of their distribution capital budget to the number of units to be accomplished at projected unit costs and recommended information technology changes needed to monitor ongoing units and unit costs from existing work management and financial systems, and helped Lansing, Michigan Board of Water & Light in reviewing the state of its GIS efforts recommending short- and long-term actions.

Education & Certifications

Mr. Johnson holds a Masters in Industrial and Systems Engineering, and a BS in Electrical Engineering from Ohio University. He has also completed numerous human resource and management programs, conferences, leadership training, supervisory training, and process improvements methodologies training and seminars.

In addition, Mr. Johnson is a past chairperson of the T & D Committee of the Electric Utility Cost Group (EUCG, Inc.) dedicated to assisting member companies in achieving excellence by providing relevant, accurate and timely benchmark information on cost, performance and best practices.

Consulting Expertise

- ◆ Professional auditing and prudence review services
- ◆ Management and operations reviews and assessments
- ◆ Management/performance and financial audits
- ◆ Benchmarking
- ◆ Coal costs and plant operations
- ◆ Purchased power expense and sales for resale
- ◆ ISO charges analysis
- ◆ Power interruptions
- ◆ Corporate planning budgeting
- ◆ GIS data modeling

Professional Affiliations

- ◆ Registered Professional Engineer, Ohio

Electric Utility Experience

Some of Mr. Johnson's electric utility assignments are listed below:

- ◆ American Electric Power
- ◆ El Paso Electric Company
- ◆ Dayton Power & Light Company
- ◆ Duke Energy Ohio, Inc.
- ◆ Jersey Central Power & Light
- ◆ Nova Scotia Power Incorporated
- ◆ Public Service Company of New Mexico
- ◆ Tacoma Power



Consulting Experience

Utility Management & Operations Audit Experience

Mr. Johnson's management audit work has focused on management and operations assessments and performance reviews; business restructuring, business process re-engineering, and process analysis teams; affiliated transactions and cost allocations; customer satisfaction and needs assessments; performance measurement development; and information systems and technology.

Benchmarking Experience

Firms distinguish themselves from others by routinely benchmarking and measuring their service performance; implementing effective measuring, monitoring and tracking systems; integrating service KPIs with companywide customer relationship management (CRM) or enterprise resource planning (ERP) systems, wherever possible; and establishing a formal process for automatically collecting and disseminating data.

Mr. Johnson has prepared separate benchmarks for new business, service restoration, asset replacement, reliability, and capacity additions. His ability to measure, monitor, assess, and track key performance indicators (KPIs) has assisted organizations with managing their service operations. Some may use only the most basic, or standard, service KPIs, such as Mean Time to Repair (MTTR), while others have developed more sophisticated metrics to hone in on the most critical areas reflecting service performance, such as field workforce utilization. Mr. Johnson has created effectiveness measures from combining weighted process measures specific to each expenditure category.

Coal Costs and Plant Operations Experience

Coal accounts for over 94 percent of the proven fossil energy reserves in the U.S. and supplies over 50 percent of the electricity vital to the nation's economy and global competitiveness.¹ Coal includes anthracite, bituminous, subbituminous, lignite, waste coal, and coal synfuel. Plant coal costs are a part of the acceleration for commercial readiness to advanced multi-pollutant emissions control, combustion, gasification, and efficiency improvement technologies to retrofit or re-power existing coal-based power plants and for deployment in new coal-based generating facilities.

When reviewing utility plant operations, Mr. Johnson keeps in mind that multiple employees at potentially different job levels are responsible for providing operation, maintenance/repair and management of coal, oil, wood or gas-fired boilers and steam-driven turbines in power plants. Therein, their efforts affect the management/performance and financial aspects of the recovery mechanisms in an audit of the fuel and purchased power of a utility. An audit most typically includes the fuel costs (with any renewable energy costs) plus system reliability costs.

Purchased Power Expense and Sales for Resale Experience

Mr. Johnson has provided professional auditing and prudence review services of utility fuel and purchased power costs, fuel clause filings, and related documentation for stated specific time periods. His experience has found that clauses allowing the utility to adjust the amounts charged for electric and gas service as the costs of gas purchases, fuel for generation or purchased power change, and other factors may contribute to changes in purchased power expenses and sales for resale. These may include:

- ◆ Resale revenues increasing due to higher volumes of excess power available for resale partially offset by lower average market prices
- ◆ Purchased power expenses decreasing, primarily due to a reduction in purchases from independent power producers
- ◆ The loss of revenue from expired contracts may be partially offset by reductions in fuel costs and purchased power costs
- ◆ Purchased power expenses increasing due to increased output from independent power producers and increased purchases of plant output at higher rates

¹ http://www.netl.doe.gov/technologies/coalpower/cctc/EIS/mesaba_pdf/Mesaba_DEIS_Chapter_1.pdf

ISO Charges Analysis Experience

Utilizing a rigorous review, a corporate self-examination and reorganization can result in improved work processes and efficiencies, while reducing the independent system operator (ISO) charges to access the power grid.

Mr. Johnson's experience with ISO charge analysis has resulted in comprehensive corporate realignment intended to achieve top quartile performance, grid reliability, and efficiencies to reduce duplication and establish single-point accountability. Specifically, Mr. Johnson's work with Midwest ISO included:

- ◆ Reviewing and reporting on costs incurred/revenues received
- ◆ Verifying consistency of costs/revenues with actual Midwest ISO invoices
- ◆ Verifying that charges, and all appropriate revenues, associated only with serving retail load customers are passing through
- ◆ Reviewing net congestion costs/revenues and net marginal losses
- ◆ Identify issues and propose recommendations

Power Interruptions and Outage Restoration Experience

Utilities generally implement a pre-tested Storm Restoration process when major outage events such as ice and/or snow storms, tornados, or hurricanes occur. Employees are then re-assigned from their normal duties to temporary duties as defined within the Restoration Process.

During a major ice storm, Mr. Johnson co-served as a Circuit "General" coordinating activities between multiple field crews and dispatching for a circuit with extensive broken poles and downed primary conductor with virtually all the services for 3,600 customers on the ground. During another major interruption over a Christmas holiday season, Mr. Johnson served as a restoration analyst and provided multiple services from delivering maps to picking up rental vehicles.

Mr. Johnson's investigation and reporting on any instances during an audit period in which customer power supplies were interrupted or requested to be interrupted include the following topics:

- ◆ The cause(s) of the interruption
- ◆ Steps taken by the company to minimize the impacts of the interruption
- ◆ Efforts made to secure replacement power, if applicable
- ◆ The methodology employed to price the replacement power, if applicable
- ◆ Cost impacts resulting from the periods during which the interruptions occurred

Corporate Planning and Budgeting Experience

Mr. Johnson helps executives, managers, and staff who want to realize the greatest return on their information assets by converting their organization's business intelligence capability into an actionable strategy.

He has managed million dollar corporate budgets for projects to convert digital and paper maps and asset records, prepared business plans, secured financing, managed construction, implemented activity based budgeting and reporting processes, implemented a daily work planning and scheduling process, and worked directly with senior management to design and develop management performance indicators. For more than 30 years Mr. Johnson has helped companies achieve lasting performance improvements by aligning processes, organization, and managerial accounting and control systems with business strategy.

GIS Data Modeling and Outage Management System Experience

Geographic information system (GIS) technology can be used for scientific investigations, resource management, and development planning. It allows us to view, understand, question, interpret, and visualize data in many ways that reveal relationships, patterns, and trends in the form of maps.

With accurate data, linking distribution customers through service conductors, secondary conductors, transformers, primary conductors including circuit interruption devices (fuses, sectionalizers, and/or reclosers) to the substation breaker is the backbone of the Outage Management System (OMS). The OMS technology using the GIS data integrated with reported outages (from customers or automated devices) provides information to outage restoration management who manage field restoration personnel. Mr. Johnson has:

- ◆ Managed an 100 employee organization with three managers and five supervisors across 11 states responsible for maintaining and providing up-to-date data to OMS that linked five million customers served through 200,000 miles of



primary conductor to 6,000+ substation breakers.

- ◆ Met a major OMS implementation schedule by managing on-time and within budget a five year-\$20 million project to convert digital and paper maps and asset records of four operating companies to the enterprise GIS platform feeding outage management.
- ◆ Used GIS statistical modeling to identify relevant variables that would significantly affect the rate of growth and rule out those that would not, including staffing and implementation issues.

Mr. Johnson has been instrumental in providing initial in-vehicle access to maps and GPS locating devices enabling field personnel to navigate to locations outside their normal service area.

Underground Facilities

Mr. Johnson reviews joint use and cost sharing agreements and construction standards for conformance with generally accepted standards. He reviews the “dig-in” process and evaluates cost sharing agreements for repairs. Capital investments associated with underground assets are reviewed for justification including the project’s contribution to improving reliability, variance from estimates, and variance from planned in-service dates. Mr. Johnson also evaluates underground equipment inspection and associated corrective maintenance programs and outage history associated with underground equipment including corrective actions that may include cable replacement. In addition, he evaluates the work management process including origination of work requests, estimating procedures, weekly planning and daily scheduling processes, reporting process for work completed, and metrics for monitoring performance.

Discovery Experience

Mr. Johnson has prepared numerous requests for data supporting consulting and internal performance improvement assignments and has extensive experience in supporting the preparation of discovery responses to 15 different regulatory jurisdictions.

Assignment Experience

The following pages contain Mr. Johnson's relevant client list.

Electric Utility Assignments

City of Tacoma, Department of Public Utilities, Light Division

Senior Operations Consultant

- ◆ Management and operations
- ◆ Performance management program
- ◆ Asset management for engineering, construction & maintenance, and electric service

Assisted the City of Tacoma, Department of Public Utilities, Light Division (dba Tacoma Power) with a comprehensive review and assessment of Tacoma Power Transmission and Distribution (T&D) Sections' management and operation practices. Schumaker & Company applied an Enterprise Performance Management approach that emphasized the relationship between service levels and costs. The mission of the enterprise was to provide good service at the lowest long-term total cost. Further, every enterprise management team has the responsibility to develop, implement and execute a performance management program that delivers measurable good service at the lowest long-term total cost. The Schumaker & Company approach evaluated the service and cost performances of Tacoma Power's T&D Section and recommended improvements in service levels as appropriate and cost reductions as practical.

Nova Scotia Power Incorporated

Lead Executive Consultant

- ◆ Coal operations
- ◆ Examination of access control for coal inventory

Assisted Nova Scotia Power Incorporated (NSPI) in undertaking an audit to examine the solid fuel inventory management function and provide meaningful recommendations for improvement. The review addressed adherence to good utility practice and consistency with the policies and procedures governing fuel management as described in the NSPI Fuel Manual. The scope of the audit included testing the assertions of existence and valuation and an examination of access control for NSPI's coal inventory. The process audited spanned the receipt of the physical inventory through to financial reporting, with a particular focus on adjustments and/or discrepancies between the physical inventory and the inventory records.

El Paso Electric Company

Executive Consultant II

- ◆ Coal costs and plant operations
- ◆ Line losses
- ◆ Purchased power expense and sales for resale

Assisted the New Mexico Public Regulation Commission (NMPRC) staff in a prudence review and audit of the fuel and purchased power cost adjustment clause (fuel clause) and related documentation of the electric business operations of El Paso Electric Company (EPE), specifically to provide professional auditing and prudence review services of EPE's fuel and purchased power costs, fuel clause filings and related documentation for the period of January 1, 2010 through December 31, 2010. This review investigated whether EPE's calculation of the fuel clause was accurate and the costs included in the fuel clause included only allowed costs and EPE's current accounting and internal control policies, management practices, and operational procedures, as they pertain to EPE's administration of the fuel clause, were effective and met related requirements.

Jersey Central Power & Light

Executive Consultant II

June 2010 – May 2011

- ◆ Distribution and operations maintenance
- ◆ Extensions and upgrades to provide regulated services

Assisted the New Jersey Board of Public Utilities in an audit of the affiliated transactions between Jersey Central Power and Light (JCP&L) and its affiliates, and a comprehensive management audit of JCP&L. Task areas included an examination of affiliate relationships and cost allocation methodologies, executive management and corporate governance, organization structure, human resources, strategic planning, finance, accounting and property records, cash management, procurement and purchasing of energy, distribution and operation management, extensions and upgrades to provide regulated services, clean energy, market conditions, contractor performance, customer service, external relations, support services, and a review of actions taken by JCP&L regarding prior audits. As part of the audit, Schumaker & Company reviewed and assessed affiliate cost allocation methodologies to determine accounting and allocation procedures for separating the costs of inter-company transactions. Analysis determined if current accounting and allocation procedures were equitable, fair, and did not favor certain affiliates over JCP&L and its ratepayers. Additionally, examination assessed the electric generation policies, distribution policies, and assignment strategies of JCP&L and its affiliates.



<p>Dayton Power & Light Company Executive Consultant II June 2010 – August 2010</p> <ul style="list-style-type: none"> ◆ Fuel procurement and management ◆ Operations and maintenance 	<p>Provided fuel cost recovery rider audit co-sourcing assistance to Dayton Power and Light Company (DP&L) to prepare DP&L for its annual review and audit to take place in the first quarter of 2011 for calendar year 2010. Items covered in the scope of work included fuel prices, allocation between wholesale and retail, sharing of gains and losses, coal handling costs, environmental compliance, PJM-related charges, power plant performance, and utility industry perspective.</p>
<p>Duke Energy Ohio Executive Consultant I January 2010 – May, 2010 Follow-up in Subsequent Years</p> <ul style="list-style-type: none"> ◆ Coal costs and plant operations ◆ Midwest ISO charges analysis ◆ Power interruptions 	<p>Assisted the Public Utilities Commission of Ohio (PUCO) staff in a management/performance and financial audit of the fuel and purchased power and system reliability tracker riders of Duke Energy Ohio, Inc. Specifically, conducted an audit of the company's fuel costs (including any renewable energy costs) plus an audit of system reliability costs. This audit addressed the management/performance and financial aspects of the recovery mechanism. It consisted of a three-year audit cycle (2009-2011) with a complete and thorough audit being conducted in each year of the audit cycle. The initial audit included the actual cost for Rider PTC-FPP and SRT for the months January through December 2009.</p>
<p>Public Service Company of New Mexico Senior Engineering Consultant July 2009 – December 2009</p> <ul style="list-style-type: none"> ◆ Coal costs and plant operations ◆ Line losses ◆ Purchased power expense and sales for resale 	<p>Assisted the New Mexico Public Regulation Commission (NMPRC) staff in a prudence review and audit of the fuel and purchased power cost adjustment clause (fuel clause) and related documentation of the electric business operations of Public Service Company of New Mexico (PNM). In specific, to provide professional auditing and prudence review services of PNM's fuel and purchased power costs, fuel clause filings and related documentation for the period of June 1, 2008 through June 30, 2009. This review provided documented evidence on the following:</p> <ul style="list-style-type: none"> ◆ PNM's calculation of the fuel clause is accurate and the costs included in the fuel clause include only allowed costs ◆ PNM's current accounting and internal control policies, management practices, and operational procedures as they pertain to PNM's administration of the fuel clause are effective and meet related requirements
<p>Lansing Board of Water & Light Lansing, MI Senior Consultant November 2006</p> <ul style="list-style-type: none"> ◆ GIS application review ◆ Futures analysis 	<p>Jointly, with UMS Group, Mr. Johnson reviewed the current state of geographical information system (GIS) including staffing and implementation issues. Developed estimated costs and benefits for upgrading GIS platform and applications development. Recommended staffing levels, strategy for GIS platform upgrade and prioritized list for future application development.</p>

American Electric Power

Senior Consultant

1965 – October 2007

- ◆ Benchmarking
 - ◆ O&M cost analysis
 - ◆ Weighted process expenditure measures
 - ◆ Distribution services
 - ◆ Historical cost analysis
 - ◆ Cost recommendations
 - ◆ GIS data modeling
 - ◆ Budget conversion
 - ◆ Customer reliability
 - ◆ Data mart development
 - ◆ Historical metrics
 - ◆ Performance improvements
 - ◆ Planning and scheduling
 - ◆ Budgeting and reporting
 - ◆ Field force networks
 - ◆ Job-site performance measures
 - ◆ Performance evaluation
 - ◆ Corporate planning/budgeting
 - ◆ Performance measures
 - ◆ Customer requirements
- ◆ Developed and recommended internal benchmarking methodology (unit cost vs. effectiveness) to allow Leaders of AEP's seven Distribution organizations to compare operating practices that account for 80% of AEP's annual Distribution Capital plus O&M expenditures. Separate benchmarks were developed for new business, service restoration, asset replacement, reliability, and capacity additions. Effectiveness measures were created from combining weighted process measures specific to each expenditure category.
 - ◆ Developed and recommended a methodology to an American Electric Power (AEP) team for monitoring installed units and unit costs for 45 categories of distribution capital expenditures. Utilized the methodology to provide historical units and unit costs for AEP's 15 company-state jurisdictions and developed a simplified forecasting method for future budgeting. Recommended changes to existing information technology systems to automate the collection and reporting of units completed and their associated unit costs.
 - ◆ Managed a 100 employee organization with three managers and five supervisors across 11 states. That organization was responsible for posting and maintaining changes to the American Electric Power (AEP) distribution geographical information system (GIS) data model containing location of five million customers served by five million poles and 200,000 miles of conductor.
 - ◆ Managed the on time and within budget completion of a five year-\$20 million project to convert digital and paper maps and asset records of four former CSW (Central & Southwest Corporation) subsidiary companies, serving 2 million customers in four states, to the AEP Distribution GIS platform.
 - ◆ Lead the evolution of GIS from a mapping tool to asset management decision support tool.
 - ◆ Developed customers experiencing multiple interruptions (CEMI) analysis of 6000 circuits with five million customers to target asset investments to critical circuits for improved customer reliability.
 - ◆ Lead the development of numerous data marts to feed a management decision support system for the distribution business unit making numerous safety, performance, and unit costing measures available to managers and their employees. Translated business unit needs to corporate data elements and communicated requirements to information technology developers and trained users.
 - ◆ Developed metrics to compare historical operations of AEP and Central and Southwest Corporation (CSW) distribution business units prior to merger of AEP and CSW in 2000.
 - ◆ Participated in teams to improve performance of distribution field personnel.
 - ◆ Lead the implementation of a daily work planning and scheduling process across a seven state area. Process included preparation of daily work schedules, reporting of completion of scheduled work, documentation of reasons schedule could not be followed and using documentation to improve scheduling.
 - ◆ Participated in teams that implemented activity based budgeting and reporting processes.
 - ◆ Participated in teams that implemented the first wide and local area network information technology applications that supported accomplishment of work of field forces.
 - ◆ Designed and implemented a process to measure job-site performance of distribution line crews across a seven state area using daily payroll reporting and standardized job estimates.
 - ◆ Trained 1500 line employees in methods of time reporting, job estimates, performance evaluation and factors affecting job performance.
 - ◆ Participated on consultant/employee teams recommending "right-sizing" of work force based on elimination of low value work tasks.
 - ◆ Participated in the implementation of a subsidiary corporate planning and budgeting process.
 - ◆ Worked directly with senior management to design and develop management performance indicators.



Ms. Martha J. King, CPA Senior Consultant

Background

Ms. Martha J. King, a Schumaker & Company associate, has more than 20 years of experience in financial consulting for the electric, gas, water, and telephone industries. Ms. King has a broad range of experience in finance, accounting, and auditing, with areas of specialization in budgeting, internal controls, affiliated relations and transactions, and surcharge audits. Working with various state commissions and regulated industries, Ms. King's consulting has been in process analysis and improvement, management reporting, affiliate relations, budgeting, and strategic planning, auditing, and customer service. She also has extensive internal control and financial auditing experience for the regulated industry, manufacturing, and financial services client base.

Ms. King provides various accounting and consulting services to businesses in Michigan. Currently, she consults with small businesses in turnaround situations. She works with the management team producing budgets, cash flow models, and financial statement analysis, obtaining loans, and targeting cost reductions. In one situation, increased efficiencies were obtained by improving procedures and communication between the company, the armored vehicle company, and the bank. (Approximately \$200,000 in coin is transported monthly.) She has consulted with businesses for computerized accounting system selection and installation. This work included analysis of the accounting and computing system needs of clients, selection the appropriate software, and consultation with clients through the installation of systems, verification of the data and reports, and final implementation of new systems.

Education & Certifications

Ms. King is a CPA and holds a BBA from the University of Michigan and is certified in two accounting information systems.

Consulting Expertise

- ◆ Affiliate relations and transactions
- ◆ Cost management and allocation methodologies
- ◆ Policy and procedure review
- ◆ Budgeting management and control
- ◆ Cash management/cash flow modeling
- ◆ Financials accounting and cash management
- ◆ Management and operations reviews/assessments
- ◆ Internal auditing and financial controls
- ◆ Technology strategy and implementation

Utility Experience

Ms. King has participated as a *Lead Consultant* or *Consultant* in the recent assignments involving the utilities below in which she investigated one or more of the following areas: affiliated relations, financial management, financial modeling, internal controls, customer accounting and customer service, organization and management, support services, and management information systems.

Electric Utilities

Central Maine Power Company	Entergy Corporation	Public Service Electric & Gas
Cleveland Electric Illuminating Company	Indianapolis Power & Light	Sempra Energy
Commonwealth Edison	Michigan Public Service Commission	St. Vincent Energy Services Ltd
Duquesne Light Company	Pennsylvania Power & Light Company	Toledo Edison Company

Gas and Oil Utilities

Curoil	Pacific Gas & Electric Company	Pennsylvania Gas and Water Company
Louisville Gas and Electric Company		

Water and Wastewater Utilities

Hartland Township

Telecommunications Utilities

BellSouth Telecommunications, Inc.	Pacific Bell	Roseville Telephone Company
Commonwealth Telephone Company	Pacific Telesis Group	U S WEST, Inc.
Illinois Bell Telephone	Qwest Colorado	Verizon (GTE and Contel)
NYNEX/AT&T		



Consulting Experience

Select Business Experience

Ms. King was an *Internal Audit Manager* for T&N Industries, the North American headquarters for an international manufacturing company, located in Ann Arbor, Michigan. She was instrumental in the establishment of a new audit department. She was responsible for all of the audits and associated communication from the company's headquarters to the international parent and the 30 North American subsidiaries. She was also responsible for all audit reports and their presentation to the Audit Committee. In addition, she coordinated and organized the North American Computer Disaster Recovery Program for North American subsidiaries and was responsible for the department budgets. She also worked with accounting to produce quarterly and annual financial statements, including the statement of cash flows.

Ms. King served as a *Financial Analyst* for New England Electric System, a large public utility holding company with 10 subsidiaries, including one wholesale and three retail companies. In this capacity, she was responsible for the preparation and analysis of the quarterly consolidated and subsidiary financial statement variance analysis for the respective Board of Directors' meetings. She supervised and coordinated the quarterly and annual public audits, analyzed over and under base rate collection by company, computed and tracked the associated interest, analyzed monthly general ledgers including performance to plan, identified opportunities and exposures, and implemented corrective actions. She was actively involved in the preparation of the financial statements and responsible for restating the Annual Report and the Supplemental Annual Report (10-year financial history) for FAS 95, Statement of Cash Flows.

In addition, Ms. King was an *Audit Senior* for Ernst & Young, where she managed and coordinated numerous audit engagements, including internal control reviews. She oversaw the engagement from initial contact with clients to presentation of financial statements and discussion of internal controls current status and potential improvements to clients and their boards of directors.

Financial Management Experience

Ms. King, CPA, has performed as *Lead Consultant* in this task area and analyzed, documented, and verified, through findings based on identifiable and measurable information and data financial management reviews. She has performed comprehensive reviews of the direct and indirect effects of borrowings and investments; short-term and long-term financial planning and analysis, budgeting, cash management, general accounting, property records, and tax management policies, procedures, and practices. And, thereby assessed the degree to which historical and projected activities have resulted in best practices.

Her experience includes numerous studies for utility, government, manufacturing and distribution, health, and retail clients while an auditor with Ernst and Young and numerous studies and analysis projects focused on regulated industry matters while with New England Electric System.

BellSouth Telecommunications, Inc.	Entergy Corporation	Pacific Gas & Electric Company
Central Maine Power Company	Illinois Bell Telephone	Pennsylvania Gas and Water Company
Commonwealth Telephone Company	Indianapolis Power & Light	Pennsylvania Power & Light Company
Commonwealth Edison	Louisville Gas and Electric Company	Qwest Colorado
Curoil	New Jersey Board of Public Utilities	Sempra Energy
Duquesne Light Company	Pacific Bell	St. Vincent Energy Services Ltd

Cash Management/Cash Flow Modeling Experience

Ms. King, CPA, has examined similar issues including many management and operations reviews in which she investigated the cash forecasting and diversification of investments processes that are used between all subsidiary corporations with the intent of determining the details of a corporation and its affiliates' cash management methodologies. She has modeled detailed cash flow projections exceeding 20 years and summarized in a page document. She has compiled many cash flow statements for reporting purposes and for the internal decision making process. Additional evaluations have focused on the performance of an assessment of the cost of capital relative to the cost of capital to utilities with comparable risk.

BellSouth Telecommunications, Inc.	Louisville Gas and Electric Company	Qwest Colorado
Central Maine Power Company	Pacific Bell	Sempra Energy
Curoil	Pacific Gas & Electric Company	St. Vincent Energy Services Ltd
Duquesne Light Company	Pacific Telesis Group	U S WEST, Inc.
Hartland Township	Pennsylvania Gas and Water Company	
Illinois Bell Telephone	Pennsylvania Power & Light Company	

Internal Auditing & Financial Controls Experience

Ms. King, CPA, has examined internal audit functions and financial internal controls as well as worked with the internal audit departments of an international manufacturing company and a national health system. Evaluations have focused on risk analysis and resource allocation, as well as work paper and report documentation.

BellSouth Telecommunications, Inc.	Duquesne Light Company	Pennsylvania Gas and Water Company
Central Maine Power Company	Louisville Gas and Electric Company	Pennsylvania Power & Light Company
Commonwealth Edison	Pacific Bell	Sempra Energy
Curoil	Pacific Gas & Electric Company	St. Vincent Energy Services Ltd

Affiliate Interests & Cost Allocations Experience

Ms. King, CPA, has over 20 years of diverse management consulting experience. She has examined affiliate relationship and cost allocation issues at various publicly-owned utilities and public power municipalities and agencies. An affiliate interest is defined as a business entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with a regulated utility. Control is defined as the power to dictate or influence the policy of an entity, whether through the ownership of voting securities, by contract, or otherwise. Her audit experience includes the full range of functional reviews of gas, electric, water, and telephone utilities.

BellSouth Telecommunications, Inc.	Entergy Corporation	Pennsylvania Power & Light Company
Central Maine Power Company	Louisville Gas and Electric Company	Public Service Electric & Gas
Commonwealth Telephone Company	Pacific Bell	Qwest Colorado
Commonwealth Edison	Pacific Gas & Electric Company	Sempra Energy
Curoil	Pacific Telesis Group	U S WEST, Inc.
Duquesne Light Company	Pennsylvania Gas and Water Company	

Section 11 & Rate Case Verification Experience

Assisted the Regulated Energy Division of the Michigan Public Service Commission (MPSC) by verifying that the requirements of *Section 11, Public Act No. 286 of 2008* are being satisfied beginning with rate case orders issued after January 1, 2009 for each regulated electric utility in the state, including Consumers Energy, Detroit Edison, Alpena Power, Indiana Michigan Power, Upper Peninsula Power, and Wisconsin Electric Power. *Subsection (1)* of *Section 11* requires the MPSC to phase in electric rates equal to the cost of providing service to each customer class over a period of five years from the effective date of this act unless an exception is met. Therefore, for each utility with more than one million retail customers (Consumers Energy and Detroit Edison), the MPSC is phasing in electric rates equal to the cost of providing service to each customer class before October 2013. For each utility with less than one million retail customers (all others in Michigan), as mentioned in *Subsection (2)* as an exception, the phase-in period for cost-of-service rates can exceed five years. The MPSC issued an order after reviewing the testimony/exhibits of the utility, interveners, and staff in rate cases. Ms. King conducted orientation meetings with MPSC Staff, developed checklists to guide the review, performed analyses on cost of service study and rate design calculations, and drafted reports highlighting background, findings/conclusions, and recommendations.

Detroit Edison	Alpena Power	Wisconsin Electric Power
Consumers Energy	Upper Peninsula Power Company	Indiana Michigan Power



Assignment Experience

The following pages contain Ms. King's relevant client list.

Electric Utility Assignments

<p>Indianapolis Power & Light <i>Lead Consultant</i></p> <ul style="list-style-type: none"> ◆ Performance reporting ◆ Outage sampling ◆ Call center process review 	<p>Performed a review of the call center and OMS at IPLCO as part of a review of the company's performance and reporting to the Indiana Utility Regulatory Commission following a series of severe storms and outages.</p>
<p>Commonwealth Edison <i>Consultant</i></p> <ul style="list-style-type: none"> ◆ Policy and procedure review ◆ Detail testing 	<p>Performed an original cost audit of Delivery System assets for the Illinois Commerce Commission focusing policy and procedures review, internal and external audit review and detail testing.</p>
<p>Public Service Electric & Gas <i>Senior Consultant</i></p> <ul style="list-style-type: none"> ◆ Reconciliation ◆ Depreciation rates ◆ Capital addition assessment ◆ Tax assessment 	<p>Assisted the New Jersey Board of Public Utilities in the evaluation of Public Service Electric & Gas's stranded cost quantification as part of the utility's electric deregulation proposal. This included a reconciliation of FERC and regulatory balance sheets, analysis of proposed changes of T&D depreciation rates, an assessment of proposed capital additions, reconciliation of cost-of-service inputs, analysis of depreciation and tax changes needed for stranded cost calculation, and assessment of tax implications of tax issues of securitization.</p>
<p>Indianapolis Power and Light <i>Senior Consultant</i></p> <ul style="list-style-type: none"> ◆ Internal controls ◆ IVR call system analysis ◆ Call center process review 	<p>Performed a three-year review of the call center and OMS as part of a review of the company's performance/reporting.</p>
<p>St. Vincent Energy Services Ltd <i>Consultant</i></p> <ul style="list-style-type: none"> ◆ Procurement procedures ◆ Fuel adjustment assessment ◆ Policies and fuel contracting 	<p>Performed a fuel audit for the Island Government of St. Vincent. Ms King audited fuel procurement procedures, recalculated fuel adjustment charge assessment, and reviewed policies on fuel contracting.</p>
<p>Entergy Corporation <i>Lead Consultant</i></p> <ul style="list-style-type: none"> ◆ Affiliate interests ◆ Transaction review ◆ Statistical sampling 	<p>Performed an affiliated relations audit for five commissions in four states (Arkansas, Louisiana, Mississippi, and Texas) and the City of New Orleans. Audit focused on transactions between regulated affiliates and non-regulated affiliates, but included an overall review of all transactions which were performed using statistical sampling.</p>
<p>Duquesne Light Company <i>Lead Consultant</i></p> <ul style="list-style-type: none"> ◆ Affiliate interests ◆ Cash management ◆ Treasury ◆ Customer accounting ◆ Credit and collections 	<p>Performed a stratified management and operations audit for the Pennsylvania Public Utility Commission. Focused on the areas of affiliate relations, internal audit, cash management, treasury, customer accounting, and credit and collections.</p>

Sempra Energy

Lead Consultant

- ◆ Affiliate interest compliance

Performed an independent audit of the holding company's compliance with the affiliated interest guidelines established by the California Public Utilities Commission.

Pennsylvania Power & Light Company

Lead Consultant

- ◆ Financial management
- ◆ Affiliate relationships
- ◆ Corporate finance
- ◆ Financial requirements planning and economic analysis
- ◆ Cash management
- ◆ Management accounting
- ◆ Taxes
- ◆ Budgeting management and control
- ◆ Internal audit
- ◆ Rates
- ◆ Management information systems

Performed a management and operations audit conducted for the Pennsylvania Public Utilities Commission. She compiled and investigated select data and statistics of Pennsylvania Power & Light Company and comparable companies for analysis and reporting. The report was further analyzed by the consulting team and Commission to target areas that warranted additional review and evaluation. She also investigated inventory management utilizing modeling techniques and further refined the data by site visits, extensive physical inventory reviews, and interviews with plant personnel. She also reviewed the costs and efficiencies of in-house construction and maintenance versus external contractors through cross-departmental meetings and extensive analysis using database techniques.

Toledo Edison Company and Cleveland Electric Illuminating Company

Lead Consultant

- ◆ Fuel procurement

Performed a focused audit of fuel procurement conducted for the Public Utilities Commission of Ohio. Investigated and analyzed fuel procurement policies and procedures for both fossil and nuclear fuels.

Central Maine Power Company

Consultant

- ◆ Management processes
- ◆ Management internal controls
- ◆ Procurement and inventory

Performed a focused review conducted for the Maine Public Utilities Commission, in which she investigated management efficiencies and cost controls focusing on procurement practices and inventory management.

Michigan Public Service Commission

Senior Consultant

- ◆ Public Act 286 Section 11 verification involving rate cases
- ◆ Multiple electric company reviews of cost of service studies and associated rate design

Assisted the Regulated Energy Division of the Michigan Public Service Commission by verifying that the requirements of Section 11, Public Act No. 286 of 2008 are being satisfied beginning with rate case orders issued after January 1, 2009 for each electric utility in the state, including Detroit Edison, Consumers Energy, Upper Peninsula Power Company, Wisconsin Electric Power Company, Alpena Power Company, and Indiana Michigan Power. Regulated energy utilities file rate cases with the Commission for approval. The Commission issues an order after reviewing the testimony and exhibits of the utility, interveners and the Commission staff. Subsection (1) of Section 11 of PA 286 requires the Commission to phase in electric rates equal to the cost of providing service to each customer class over a period of five years from the effective date of this act unless an exception is met. Therefore, for each regulated electric utility with more than one million retail customers (Consumers Energy and Detroit Edison), the MPSC is phasing in electric rates equal to the cost of providing service to each customer class before October 2013. For each regulated electric utility with less than one million retail customers (all others in Michigan), as mentioned in Subsection (2) as an exception, the phase-in period for cost-of-service rates can exceed five years.



Gas Utility Assignments

Pennsylvania Gas & Water Company*Lead Consultant*

Performed a management and operations review in which she investigated various accounting and finance focus areas.

- ◆ Cash management
- ◆ Dividends to parent company
- ◆ Affiliate relationships and transactions
- ◆ Allocation of fees
- ◆ Management information systems

Curoil*Senior Consultant*

Performed an operations audit for the Island Government of Curacao. Audit focused on overall operations while Ms. King focused on customer service, financial accounting and internal audit processes, dividend policies and liquidity and cash flow issues.

- ◆ Customer service
- ◆ Financials accounting
- ◆ Internal audit processes
- ◆ Dividend policies
- ◆ Liquidity and cash flow

Pacific Gas & Electric*Lead Consultant*

Performed an independent audit of the company's compliance with the affiliated interest guidelines established by the California Public Utilities Commission for the audit years 2001 - 2006.

- ◆ Affiliate interest compliance

Louisville Gas and Electric Company*Consultant*

Performed a management and operations audit, including an internal audit, conducted for the Kentucky Public Service Commission.

- ◆ Affiliate relationships
- ◆ Cash management
- ◆ Customer accounting
- ◆ Credit and collections

Water/Wastewater Utility Assignments

Hartland Township*Senior Consultant*

Analyzed the financial situation and cash flows for the Hartland Township Sewer Assessment Fund from 2005 to 2034. Modeled cash flow for four different potential scenarios – best case, expected case, worst case, and worst case without reassessment of delinquencies. Summarized findings and presented them to the Deputy Finance Director, Finance Director, and the Hartland Township Board.

- ◆ Summary financial projections for Sewer Assessment Fund
- ◆ Detailed cash flow model 30 years forward for Sewer Assessment Fund

Telecommunications Assignments

<p>Qwest Colorado Senior Consultant</p> <ul style="list-style-type: none">◆ Data verification◆ Internal controls	<p>Assisted with a three-year project to assure that the performance assurance plan (PAP) is accurate and all areas in compliance. Focused on the surcharge payment verification made by Qwest to CLECs. Reviewed processes and controls and performed data verification.</p>
<p>Pacific Bell Lead Consultant</p> <ul style="list-style-type: none">◆ Surcharge calculations	<p>Performed an independent audit of two of the company's surcharges, CHCF-B and CTF, to determine compliance with CPUC orders and accuracy of surcharge calculations and remittances.</p>
<p>NYNEX/AT&T Consultant</p> <ul style="list-style-type: none">◆ Root cause analysis◆ Management reporting	<p>Executed the audit of Carrier Access Billing System's for NYNEX and AT&T, both of whom rely on this NYNEX process. She was responsible for the root cause analysis, corrective activities, and management reporting portions of the study.</p>
<p>Roseville Telephone Company Lead Consultant</p> <ul style="list-style-type: none">◆ Surcharge calculations	<p>Performed an independent attestation of the company's surcharge, CHCF-B, to determine compliance with CPUC orders and accuracy of surcharge calculations and submissions.</p>
<p>BellSouth Telecommunications, Inc. Lead Consultant</p> <ul style="list-style-type: none">◆ Financials◆ Cash management	<p>Performed a focused management audit examining the impact of Kentucky's price regulation plan on competition and on BellSouth operations. This review produced recommendations on modifications to Commission service requirements, reporting, and the price regulation plan.</p>
<p>Commonwealth Telephone Company Lead Consultant</p> <ul style="list-style-type: none">◆ Treasury accounting◆ Cash management and control◆ Dividend policy	<p>Performed a stratified management and operations audit conducted for the Pennsylvania Public Utility Commission. She investigated the areas of treasury, accounting, budget management and control, and internal audit. She also investigated the dividend policies with a focus towards the telephone company's dividends to its parent.</p>
<p>Pacific Telesis Group Consultant</p> <ul style="list-style-type: none">◆ Affiliate interests◆ Financials◆ Regression analysis	<p>Performed an audit of the distribution of PacTel Corporation stock owned by Pacific Telesis Group (Telesis) to Telesis shareholders ("spin-off") for the California Public Utilities Commission. Investigated the financial impact that the spin-off would have on the regulated affiliate, Pacific Bell, through analysis of financial statements and economic studies of PacTel Corporation, Pacific Bell, and the consolidated entity Telesis. Also performed regression analyses on selected financial data to further evaluate potential financial impact of the spin-off.</p>
<p>U S WEST, Inc. Consultant</p> <ul style="list-style-type: none">◆ Finance and accounting◆ Management structure	<p>Performed a regulatory impact review and the effect on ratepayers of U S WEST Communications, for a <i>Three-State Steering Committee</i> (TSSC) (Arizona, Iowa, and Oregon) on behalf of the <i>U S WEST Regional Oversight Committee</i>, comprised of 14 states served by U S WEST Communications.</p>
<p>Illinois Bell Telephone Company Consultant</p> <ul style="list-style-type: none">◆ Affiliate interest◆ Cost management and allocation methodologies	<p>Performed a focused management audit of the affiliated transactions of Illinois Bell Telephone company (IBT) for the Illinois Commerce Commission. Investigated billings to IBT from two key affiliates, Ameritech Services, Inc., and Ameritech Information System, Inc., with respect to total cost assessment, cost accumulation and assignment, and allocation methodologies. Determined the appropriateness of allocations between affiliates and the allocation methodologies.</p>



Mr. D. Kerry Laycock, CMC® Principal Consultant

Background

Mr. Kerry Laycock has 29 plus years of experience as a management and organizational consultant, including participation on ten Schumaker & Company projects in the past seven years. In addition to his extensive experience with utility operational assessments he has completed many diverse management consulting assignments. He has been involved in a wide range of large-scale change initiatives and organizational restructurings, operational assessments, process re-engineering and municipal shared-services implementation. Recent projects include regional integration of local police services (including emergency communications), assessments of local delivery of Federal nutrition, lead abatement and housing programs, utility process and job redesign, municipal restructuring, and HR systems redesigns for payroll, performance management, disability management, employee selection and workforce planning. He began his career facilitating quality circles in the automotive industry. He began his career facilitating quality circles in the automotive industry.

Education & Certifications

Mr. Laycock is a *Certified Management Consultant* (CMC®), as a member of the Institute of Management Consultants (IMC). This certification mark represents evidence of the highest standards of consulting and adherence to the ethical canons of the profession. Less than 1% of all consultants have achieved this level of performance.

Mr. Laycock holds a Bachelors of Business Administration in Management from Eastern Michigan University and a Masters degree in organization development from Eastern Michigan University. He is also a qualified administrator of the Myers-Briggs Type Indicator®. In addition to consulting, he has taught graduate and undergraduate courses in organizational behavior and organizational development. He also serves on the boards of directors of a number of nonprofit organizations.

Consulting Expertise

- ◆ Management and operations reviews and assessments
- ◆ Management/performance and organizational reviews
- ◆ Merger reviews and facilitation
- ◆ Business process re-engineering
- ◆ Emergency (911) communications management
- ◆ Job design and performance management
- ◆ Staffing models and deployment optimization
- ◆ Municipal shred-services
- ◆ Governance structure and board development
- ◆ Human resource reviews, diversity and EEO
- ◆ Call center operations and restructuring
- ◆ Trend analysis

Business and Government Experience

Today Mr. Laycock's clients include a broad spectrum of business and government organizations.

- ◆ Ann Arbor Transportation Authority
- ◆ Avizent
- ◆ Blue Cross Blue Shield & Blue Care Network
- ◆ City of Ann Arbor, MI
- ◆ City of Ann Arbor Housing Commission
- ◆ City of Ann Arbor Water Utilities
- ◆ City of Battle Creek, MI
- ◆ City of Dearborn, MI
- ◆ City of Detroit, MI
- ◆ City of Southfield, MI
- ◆ Continental Teves, Inc.
- ◆ Cousins Environmental Control/BBC
- ◆ DaimlerChrysler, AG
- ◆ DTE Energy/Detroit Edison
- ◆ Detroit Regional Chamber of Commerce
- ◆ Detroit Medical Center
- ◆ Domino's Pizza, Inc.
- ◆ Domtar Gypsum
- ◆ Jersey Central Power & Light
- ◆ Kent County, MI
- ◆ MI Department of Mental Health
- ◆ MI Supreme Court
- ◆ Minneapolis Park and Recreation Board
- ◆ Monroe County, MI
- ◆ New Jersey Board of Public Utilities
- ◆ Oakland County, MI
- ◆ Office of Financial & Insurance Services-General Counsel, MI
- ◆ PECO Energy Company
- ◆ Pennsylvania-American Water
- ◆ Pennsylvania Public Utilities Commission
- ◆ Philadelphia Gas Works
- ◆ Pfizer, Inc.
- ◆ R. R. Donnelley & Sons Co.
- ◆ Town of Hilton Head Island, SC
- ◆ Trinity Health/St. Joseph Mercy Hospital

- ◆ Edison Credit Union
- ◆ Equitable Gas Company
- ◆ Ford Motor Company
- ◆ Henry Ford Health System
- ◆ Holiday Retirement Corp.
- ◆ Huron Clinton Metropolitan Parks Authority
- ◆ Time Warner Cable
- ◆ United Methodist Retirement Communities
- ◆ U. S. Environmental Protection Agency
- ◆ Washtenaw Intermediate School District
- ◆ Washtenaw County, MI
- ◆ Washtenaw County Sheriff

Board Experience

Mr. Laycock has over 20 years of experience working nonprofit and public sector boards. He has conducted numerous board retreats and planning processes. Most recently, he conducted board retreats and facilitated the strategic planning process for United Methodist Retirement Communities. He has facilitated goal setting and planning meetings for County Boards of Commissioners, City Council, Parks and Recreation Commission, Road Commission and others. In addition, he has developed and administered an on-line board evaluation process and is called upon to work with board nominating committees.

Mr. Laycock has also serves on a number of nonprofit boards. As Chairman of the Arts Foundation of Michigan, Mr. Laycock facilitated the merger of five arts service and funding organizations into a single state-wide organization that continues today as ArtServe Michigan. Currently he serves on the State YMCA of Michigan board and the YMCA of Camp Hayo-Went-Ha board in Traverse City, Michigan.

Consulting Experience

Utility Management & Operations Audit Experience

Mr. Laycock's management audit work has focused on management and operations assessments and performance reviews; business restructuring, business process re-engineering, and process analysis teams; affiliated interests; customer satisfaction and needs assessments; performance measurement development; and human resources.

Merger Review Experience

Mr. Laycock reviewed the PECO Energy Company's overall compliance, or plans to comply, with the non-rate related provisions of recent merger agreements affecting electric and natural gas distribution operations in Pennsylvania. This includes, but is not limited to, the 2002 Unicom merger and the pending merger with Public Service Electric and Gas Company. Mr. Laycock's first merger integration project was integrating the General Counsel offices of Chrysler Corporation and American Motors.

Staffing Models and Compensation Experience

Mr. Laycock's assessment of the City of Ann Arbor Housing Commission, MI employee staffing models and compensation, included evaluating the existing staffing model (including number of staff) to meet the needs of the services provided, assessing available skills and abilities of the client positions relative to needs of services being provided, and assessing the compensation levels of positions relative to job requirements and skills and abilities needed to provide services and market rates for similar jobs. He assesses the distribution of activities within the staffing model, as well as the spans of control of supervisors.

The evaluation includes identification of past, current, and anticipated future staffing model and compensation problem areas and opportunities for each aspect of the organization and recommended strategies to improve service delivery.

Organizational Review, Analysis, and Assessment Experience

Mr. Laycock has been involved in a wide range of large-scale change initiatives and operational assessments. The primary focus of his work in recent years is organizational structure, work process and job design. Recent projects include utility process and job redesign, municipal restructuring and HR systems redesigns for payroll, disability management, employee selection and year-end compensation. He began his work facilitating quality circles in the automotive industry. Today his clients include business, government and nonprofit organizations.

To conduct a comprehensive assessment of operations, Mr. Laycock includes an evaluation of the current organizational structure and its ability to support a defined organizational strategy. In addition, he evaluates the existing operational practices, both in terms of efficiencies and effectiveness, thereby, assessing the size and structure of the organization in comparison to similarly-sized competitors, their organization and distribution of functions, and authority relationships within the organizational structure.

Ann Arbor Transportation Authority
City of Ann Arbor Housing Commission, Michigan
City of Ann Arbor, Michigan
City of Battle Creek, Michigan
City of Dearborn, Michigan
City of Detroit Childhood Lead Poisoning Prevention Program
City of Southfield, Michigan
Detroit Edison

Edison Credit Union
Jersey Central Power & Light
Minneapolis Park and Recreation Board
State of Michigan Office of Financial and Insurance Regulation
United States Environmental Protection Agency
Washtenaw County, Michigan
Women, Infant and Children Nutrition Program City of Detroit, MI

Job Analysis Experience

Mr. Laycock uses various methodologies for analyzing the requirements of a job. Linking job design to process analysis, Mr. Laycock assures that the task requirements, role authority and associated competencies are aligned to appropriate outcomes and performance measures. The process begins by identifying major job requirements (MJR) and links them to skills, education, training, etc., needed to successfully perform the job functions. It can also be used to identify documents and other elements vital to the candidate evaluation, referral and selection process, such as measurement methods and interview requirements. Job design is the basis for selection, development, evaluation and compensation. Mr. Laycock's clients include the Women, Infant and Children Nutrition Program for the City of Detroit, Michigan and the Minneapolis Park and Recreation Board.



Municipal Shared Services Experience

Mr. Laycock has been on the forefront of the effort in Michigan to enhance citizen service and reduce operating costs through shared services and multi-jurisdictional collaboration. He led the Kent County Multi-jurisdictional Parks and Recreation Study project. This project was aimed at assessing current parks and recreation services and amenities and recommending methods for cross-jurisdictional improvement strategies including revenue opportunities and new governance structures. He also led a team of consultants on the *Organizational Strategic Plan* for the Ann Arbor Transportation Authority. This project will design the internal structure and processes to move the organization from a municipal to regional, multi-modal transit system.

Customer Service and Field Operations Experience

Mr. Laycock evaluates the customer service practices of staff and the Board, both to internal and external customers. The evaluation includes identification of past, current, and anticipated future customer service problem areas and recommended strategies to improve service delivery. Among the areas or issues to be addressed in this examination are:

- ◆ The capabilities and effectiveness of customer information and billing systems compared to systems used by other comparable companies and the training of customer service personnel in system utilization.
- ◆ The reasonableness of staffing levels and overall performance of a call center, including validation of telephone access statistics, and appropriate use of interactive voice response (IVR) equipment and telecommunications technology in general.

City of Ann Arbor Housing Commission, Michigan
City of Ann Arbor, Michigan
Equitable Gas Company
Philadelphia Gas Works

Pennsylvania-American Water Company
PECO Energy Company
Edison Credit Union

Trends Analysis Experience

Data management as part of manpower planning is often inadequate, Mr. Laycock is able to calculate and produce predictive information which will be of great use to the business. Using trend analysis, he can calculate and produce predictive information and run comparative analysis of a company's financial ratios over time and relate their impact to manpower planning. Clients include Washtenaw County, MI.

Human Resources Experience

Mr. Laycock reviews the human resource programs to determine the degree to which they are part of a planned, cohesive system designed to deliver HR services and meet governmental regulatory requirements. Of particular importance, is the degree to which HR processes and programs support the strategic direction of the organization and the degree to which HR serves as a business partner to Executive Management. These assessments include statistical, operational and process reviews of the function.

Jersey Central Power & Light
Equitable Gas Company
Philadelphia Gas Works

Pennsylvania-American Water Company
PECO Energy Company
Town of Hilton Head Island, South Carolina

Best Practice Comparisons Experience

Knowing where you stand in comparison with competitors and customer perceptions can be critical to survival particularly when your business has been specifically targeted. It is often thought that benchmarking only involves competitive comparisons but this is wrong. Most of the time, the processes which are most vulnerable are non industry specific, for example accounts payable and receivable, staff turnover, delivery performance, product support, etc.

Mr. Laycock can help clients develop and implement benchmarking strategies that feed directly into your key performance indicators and thence to the project by project process. He works with clients to establish why, what, who, when, where, and how to benchmark competitors and best-in-class processes and performers. Clients include:

Women, Infant and Children Nutrition Program City of Detroit, Michigan
Edison Credit Union
City of Ann Arbor, Michigan

Management Assessment Experience

The executive management function is very critical to the overall success and viability of an organization. Decisions and initiatives undertaken within this functional area impact all issues facing both short-term and long-term. As a result, it is imperative that appropriate managers are in place, that they have a clear set of directives from the Board of Directors translated into a carefully thought out strategic plan, and that proper management policy, procedures, and control systems are in place to ensure the continued effectiveness of the operations. The organizational structure (with its various local, regional, and corporate layers of management providing direction as well as administrative and support services to designated service areas) must function efficiently and truly take advantage of local involvement in decision-making. In this area, Mr. Laycock looks at organization structure and planning, management communications and control, administrative procedures and control, and strategic planning. When appropriate, Mr. Laycock, assesses individual executive managers in conjunction with restructuring projects.

Equitable Gas Company
Philadelphia Gas Works
Pennsylvania-American Water Company

PECO Energy Company
Town of Hilton Head Island, South Carolina

Diversity and EEO Experience

Mr. Laycock will analyze the effectiveness of diversity and equal employment opportunity (EEO) programs and activities, which include state and federally-required filings. This evaluation is to include, but will NOT limited to, an assessment of the following:

- ◆ Recent employment levels and trends in the mix of minority and women employees and the volumes and trends in purchases and contracting arrangements with minority, women and persons with disability-owned businesses.
- ◆ Complement of minority and female as compared to its customer mix and labor market.
- ◆ Degree of the conformity with a Commission's Policy Statement on Diversity at Major Jurisdictional Utility Companies and compliance with all other Commission orders and directives related to a utilities' diversity efforts.
- ◆ Number of minority, female, and persons with disability-owned vendors with whom contracts for goods and services and how reflective this is of the available vendors; and any programs, policies or procedure for achieving goals or objectives regarding purchases from these vendors.
- ◆ Effectiveness of recruiting, advertising, training, promotion and retention practices with respect to EEO.
- ◆ Effectiveness of the Company's internal procedures for addressing complaints from individuals who allege that they have been discriminated against due to their race, religion, age, national origin, sex, or disability.
- ◆ Adequacy of EEO (i.e., are the goals challenging) and how various levels of management are held accountable for achieving these goals.

Clients include: Equitable Gas Company, Philadelphia Gas Works, and Pennsylvania-American Water Company.

Employee Surveys Experience

There are many issues that generally go unspoken and can have a significant effect on how a business operates overall. By conducting employee surveys, Mr. Laycock can reach the heart of many of those issues. Ethics surveys, for instance, can reflect a great deal about your business, and use the results to make well-informed decisions regarding how to enhance employee satisfaction.

Simply making the effort to engage employees with employee surveys sends a strong message of cooperation and collaboration. The answers that employee surveys provide can help guide business in the right directions. Some of the issues addressed by Mr. Laycock during a survey may even provide a basis for communication that is integral to business but is currently unaddressed. Clients include the United States Environmental Protection Agency.

Call Center Operations and Restructuring Experience

The reasonableness of call center staffing levels and the center's overall performance to include validation of telephone quality measures, including call abandonment rate, percentage of call answered within 30 seconds, customer complaint surveys, excessive individual on-line or off-line, equipment downtime, and call monitoring are issues Mr. Laycock reviews as an expert consultant.

Determining whether the current customer telephone configuration, technology, and the locations and number of dedicated



personnel provide optimal customer service while effectively containing total telecommunications costs is done through interviews and site visits. Clients include:

City of Ann Arbor Police Department	Washtenaw County Sherriff
City of Battle Creek, Michigan	Women, Infant and Children Nutrition Program City of Detroit, Michigan
Edison Credit Union	

Facilitation Experience

Mr. Laycock uses facilitation in business and organizational settings, as a minimum, to ensure the designing and running of successful meetings and/or in almost any consulting effort to enable groups to work cooperatively and effectively. His job as a facilitator is to help manage a process of information exchange. While Mr. Laycock is an expert facilitator and his role is to offer advice, particularly about the content of a discussion, he also assists with HOW the discussion is proceeding.

As an example, Mr. Laycock's task may be to communicate with members of a public/interest group regarding legislation and regulation. Since one purpose of this communication is to reduce resistance to legislation and regulations, he can choose a more facilitative, consultative role, rather than being a simple "bearer of information". In this case, the facilitation role is more likely to encourage others to be more cooperative. Clients include: Washtenaw County, Michigan and the Michigan Supreme Court, State Court Administrative Office.

Assignment Experience

The following pages contain Mr. Laycock's relevant client list.

Electric Utility Assignments

Jersey Central Power & Light

Executive Consultant II

- ◆ Operational structure
- ◆ Human resources
- ◆ Diversity/EEO

Assisted the New Jersey Board of Public Utilities in an audit of the affiliated transactions between Jersey Central Power and Light Company and its affiliates, and a comprehensive management audit of Jersey Central Power and Light Company (JCP&L). Schumaker & Company reviewed and assessed affiliate cost allocation methodologies to determine accounting and allocation procedures for separating the costs of inter-company transactions. Analysis determined if current accounting and allocation procedures were equitable, fair, and did not favor certain affiliates over JCP&L and its ratepayers. Additionally, examination assessed the electric generation policies, distribution policies, and assignment strategies of JCP&L and its affiliates. This audit included an examination of affiliate relationships and cost allocation methodologies, executive management and corporate governance, organization structure, human resources, strategic planning, finance, accounting and property records, cash management, procurement and purchasing of energy, distribution and operation management, extensions and upgrades to provide regulated services, clean energy, market conditions, contractor performance, customer service, external relations, support services, and a review of actions taken by JCP&L regarding prior audits.

PECO Energy Company

Lead Consultant

- ◆ Executive management and human resources
- ◆ Customer service
- ◆ Merger review

Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including both gas and electric operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Detroit Edison

Principal Consultant

- ◆ Organization and management analysis
- ◆ Reorganization assessment and implementation

Performed a variety of organizational assessments and restructurings for Detroit Edison over a period of five years. Mr. Laycock planned and facilitated the restructuring of Design Engineering and Technical Support Engineering into a combined Engineering Support Organization. He managed a reorganization of the Corporate Auditor's Office. In addition, he helped design and establish a Customer Relationship Management function within the marketing organization.



Gas Utility Assignments

Equitable Gas Company*Executive Consultant II*

- ◆ Executive management, external relations, and human resources
- ◆ Customer service, billing, and collections
- ◆ Diversity and EEO

Performed a stratified management and operations audit of Equitable Gas Company (EGC), a subsidiary of EQT Corporation, and its relationship with its affiliates. The primary focus of this management and operations audit are the business components of EGC that are still subject to regulation by the Pennsylvania Public Utility Commission, specifically EGC service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. The objectives include the determination of what improvements, if any, can be accomplished in the management and operations of EGC pursuant to Section 522(b) of the Public Utility Code 66 Pa. C.S. §522(b). Specifically, Schumaker & Company looked for economies, efficiencies, or improvements which benefit EGC and its ratepayers. In doing so, Schumaker & Company identifies which, if any, economically practical opportunities for cost saving measures and/or better service can be instituted.

Philadelphia Gas Works*Executive Consultant II*

- ◆ Executive management and human resources
- ◆ Customer service
- ◆ Diversity/EEO

Performed a stratified management and operations audit of Philadelphia Gas Works (PGW). The primary focus of this management and operations audit is to review those PGW business components subject to regulation by the Pennsylvania Public Utility Commission (PaPUC), specifically PGW service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of, efficiencies, or improvements which benefit PGW and its ratepayers. In doing so, Schumaker & Company identified which, if any, economically practical opportunities for cost saving measures can be instituted.

PECO Energy Company*Lead Consultant*

- ◆ Executive management and human resources
- ◆ Customer service
- ◆ Merger review

Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including both gas and electric operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Water/Wastewater Utility Assignments

Pennsylvania-American Water Company*Executive Consultant II*

- ◆ Executive management and human resources
- ◆ Corporate culture, management structure, and staffing levels
- ◆ Diversity/EEO
- ◆ Customer service

Performed a stratified management and operations audit of Pennsylvania-American Water Company (PAWC) for the PaPUC with the primary focus areas being costs borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses are of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Government and Business Assignments

Kent County, Michigan

Principal Consultant

- ◆ Financial and service assessments
- ◆ Benchmarking/best practices
- ◆ Revenue and governance enhancement

This project identified opportunities for multi-jurisdictional efforts to improve efficiency, increase recreational programming, and expand parkland throughout the county. Leading a team to analyze county-wide parks and recreation functions and services, Mr. Laycock completed a detailed financial, service level, and geographic analysis of parks and recreation throughout the county providing recommendations on revenue, governance, shared services and programming.

Minneapolis Park and Recreation Board

Principal Consultant

- ◆ Strategic restructuring
- ◆ Job and process analysis and redesign
- ◆ Staffing studies
- ◆ Labor relations

Responsible for analyzing current organization structure and staffing and aligning to community needs and priorities, analyzing and redesigning work processes to improve operation efficiency, and providing labor relations support to implement changes across seven collective bargaining units.

Ann Arbor Transportation Authority

Principal Consultant

- ◆ Strategic alignment
- ◆ Organizational assessment
- ◆ Governance structure
- ◆ Succession planning
- ◆ Job redesign
- ◆ Process analysis and redesign

Mr. Kerry led a team of consultants responsible for aligning the organization to the requirements of the recently completed Transit Master Plan that moves the organization from a municipal transit system to a regional, multi-modal transit system. Work included operational reviews, process analysis and redesign, job analysis and redesign, and a redesign of the governance and leadership structure.

Washtenaw County, Michigan

Principal Consultant

- ◆ Transition team
- ◆ County reorganization
- ◆ Alignment of organizational changes to priorities
- ◆ Trends analyses

Helped plan and manage the transition process for a new County Administrator, to advise on the reorganization of the County, to help the Washtenaw County Board of Commissioners (BOC) define clear priorities for the next budget cycle, and to align organizational changes to BOC priorities. Recently completed a summary of external trends affecting local government in Michigan that will assist in defining organizational changes and budget development for FY2012/2013.

Washtenaw County Sheriff's Office, Michigan

Principal Consultant

- ◆ Transition team

Hired by the newly elected Sheriff in November, 2008 to work with his transition team. During 2009, he created and facilitated the Interagency Cooperation Team (ICT) comprised of the Sheriff and senior law enforcement officials in Washtenaw County. Through the ICT process, we have consolidated into a single SWAT team, consolidated into a single crisis negotiation team and coordinated canine resources throughout the County. Also led a team responsible for transferring the Ypsilanti Police Department (YPD) dispatch function to the Washtenaw County Sheriff's Office and co-locating the Sheriff's and City of Ann Arbor Police Department dispatch. The dispatch project has reduced costs for YPD, increased revenue for the Sheriff's Office and saved jobs. We are currently expanding the cooperative effort and leveraging the combined dispatch to develop a closest car response protocol that will allow cross-jurisdictional response. In the face of unprecedented budget and staff reductions, this approach can increase coverage and decrease response time with fewer officers on the road.



City of Detroit Childhood Lead Poisoning Prevention Program, Michigan*Principal Consultant*

- ◆ Process and job design
- ◆ Operational metrics
- ◆ Program assessment

Mr. Laycock was responsible for process and job design for the program, including the identification of operational metrics, program outcomes, IT system requirements, and internal efficiencies. The primary process challenge was to manage cases (both medical and property) across multiple City departments, the Wayne County Prosecutor's Office, the CDC, and the Michigan Department of Community Health.

City of Ann Arbor Housing Commission, Michigan*Lead Consultant*

- ◆ Staffing models and compensation
- ◆ HUD regulations and current public housing best practices
- ◆ Organization and management analysis
- ◆ Customer service

Participated on the City of Ann Arbor Housing Commission (AAHC) operational assessment leading to recommendations on financial and organizational issues. Specifically, Schumaker & Company consultants, including Mr. Laycock, performed three key assessments: 1) a high-level analysis of the existing organization structure of services involving major areas of AAHC operations; 2) an evaluation of the present staffing structure for appropriateness, effectiveness, and efficiency of operations; and 3) an assessment of department processes for improved effectiveness and efficiencies with a goal to create an organizational climate of empowerment and accountability. Schumaker & Company identified potential organizational, staffing, and business process changes for consideration by AAHC management. A five-year strategic plan was presented and a final report written.

State of Michigan Office of Financial and Insurance Regulation*Senior Consultant*

- ◆ Organization and management
- ◆ Measurement tool development

Conducted an assessment of the State of Michigan, Office of Financial and Insurance Regulation (OFIR), Mortgage Examination and Investigation Section. Interviews and research were conducted to identify and describe characteristics of six state mortgage regulatory programs, including their organizational framework, employee training, and best practices/techniques. Also included was an assessment of the current complaint-based approach versus routine examination approach on a 36/48 month cycle. Quantitative data was identified and captured to develop a tool for OFIR to process the data in measuring the impact of additional staffing in reducing predatory lending practices. Recommended action plans to implement given those findings.

City of Detroit, Michigan Women, Infant and Children Nutrition Program*Principal Consultant*

- ◆ Organizational review, analysis, and assessment
- ◆ Job analysis
- ◆ Call center restructuring
- ◆ Quality improvement
- ◆ Best practice comparisons

Completed an operational review and quality improvement project for the City of Detroit's Health and Wellness Promotion's Women, Infant and Children (WIC) nutrition program. WIC provides Federal grants to States for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk. This project involved a review of staffing models, clinic scheduling models, clinic process documentation, technology integration and training. Mr. Laycock provided recommendations that improve nutritional outcomes and operational efficiency. His contributions included the first ever balanced scorecard for this federally funded program as well as a process to engage WIC staff in ongoing quality improvement. In addition, he was responsible for implementing a comprehensive Total Quality Management process.

State of Michigan Office of Financial and Insurance Services*Senior Consultant*

- ◆ Organization and management review

Conducted an assessment of the operational and managerial aspects of the Office of General Counsel for the Office of Financial and Insurance Services (OFIS). Interviews with key management and staff consisted of reviews of the organization and chief processes for which each key person was responsible, as well as discussions of any areas of particular interest, plus review of documents and associated analyses were performed. A well balanced report that reflected both areas that hold opportunity for operational and financial improvement and those areas that demonstrate exemplary management and operation effectiveness was written and delivered.

City of Ann Arbor, Michigan

Principal Consultant

- ◆ Organization and management analysis
- ◆ Capital and maintenance planning
- ◆ Customer services and field operations
- ◆ Best practice comparisons

Mr. Laycock worked for the City of Ann Arbor for more than three years on a city-wide reorganization. Originally, the project was limited to the water utilities and was intended to accommodate the effects of an early retirement program and achieve permanent staffing reductions and operational efficiencies. Working with union/management design teams, operations and mechanic jobs were combined into a single classification. This classification is divided into five levels with each level having progressively higher licensing and competency requirements. Utilizing the combined classification, the water treatment plant now operates with five fewer employees, including one less supervisor, producing an annual operating cost reduction of more than \$300,000.00. Similar results were achieved in the wastewater treatment plant.

Based on the success of this effort, the City of Ann Arbor has consolidated its former departments into four service areas and has expanded the process and job redesign initiatives. In Public Services, 28 classifications were reduced to three broadly-defined, broadly-skilled classifications yielding substantial efficiencies and staffing reductions. For example, the new Field Operations Technician: Forestry and Facilities combines 12 classifications from parks maintenance and facilities maintenance. This has allowed for an 8 percent staffing reduction (12 FTEs) producing an annual savings of over \$700,000.00. All field operations work in the Public Services Area has been redesigned. (Public Services include the former, Street Maintenance, Solid Waste, Parks Operations and Maintenance, and Utilities Field Operations departments.)

In addition, clericals in 27 union-represented classifications were combined into a single classification and are assigned work throughout their service area. This resulted in 6 FTEs eliminated in the FY 04-05 budget and an additional 6.5 in subsequent budgets.

Edison Credit Union

Principal Consultant

- ◆ Organization and management analysis
- ◆ Customer service and call center operations
- ◆ Best practice comparisons

Completed a project to upgrade technology and work processes for the banking call center of Edison Credit Union. ECU held over \$480 million in assets for employees of Detroit Edison, Michigan Consolidated Gas and the parent company, DTE Energy. This project documented all current customer-facing processes and banking transactions, and evaluated supporting technology and customer service personnel. The analysis included identification and tracking of new performance metrics, time studies, issue analysis and an assessment of customer preferences. Project deliverables included process optimization, and technology upgrade recommendations, an optimized staffing model, standardized training protocols and on-line knowledge management objects tied to each step of the work processes.

City of Detroit, Michigan

Lead Consultant

- ◆ Development and analysis of process maps (fire)
- ◆ Development of findings, conclusions, and recommendations (fire)

Recommended cost reduction planning and potential revenue enhancement initiatives based on process mapping and analysis of key processes for designated departments (fire and public works, plus potentially reviewing police, transportation, and health/wellness promotion in future months). These plans/initiatives address risks associated with implementation, not only within the designated departments, but especially its potential impact on the delivery of services to the residents and surrounding communities.



United States Environmental Protection Agency*Senior Consultant*

- ◆ Organizational assessment
- ◆ Employee surveys

Completed a team assessment for the Program Managements Network Team responsible for computer network administration for the National Vehicle and Fuel Emissions Laboratory. Conducted an organizational assessment and staff development process for the Program Management Network Team. The assessment included the completion and interpretation of the Campbell-Hallam™ team development survey, which was followed by feedback and action planning sessions with management and staff. Based on his recommendations, the EPA is moving forward customer service improvement and team development strategies. Mr. Laycock was also recently engaged by the EPA's Motor Vehicle Emission Simulator (MOVES) development team on a role clarification quality assurance process initiative.

Town of Hilton Head Island, South Carolina*Lead Consultant*

- ◆ Human resource assessment

Provided services related to an assessment of the Town of Hilton Head Island's (Town) current business processes, organization structure, staffing levels, and software that support the management of the Town's employee information. This study evaluated the performance of the subject organization, staffing, operations, and costs with the intended final result of identifying opportunities for improving, revising, or replacing the processes, organization structure, staffing levels, and software. Conducted an on-site analysis using the least intrusive means possible, concluding with the delivery of an oral presentation summarizing the findings to that time. Subsequently, produced a detailed draft organizational review report that was presented to the Town Board for review.

City of Battle Creek, Michigan*Principal Consultant*

- ◆ Organization and management analysis
- ◆ Call-center implementation

Completed an assessment of the City's Citizen Response Management (CRM) system and made organizational, process and technology recommendations. Mr. Laycock then worked with the City and a technology partner to implement new, technology, optimized issue and request management processes, and performance based-job designs.

City of Dearborn, Michigan*Senior Consultant*

- ◆ Organizational review, analysis, and assessment

Assisted the City of Dearborn, who like many organizations, was faced with delivering essential services to its citizens with a reduced level of resources, by performing an assessment of selected departments, specifically the Assessor's Office and Camp Dearborn, as a means to streamline and consolidate its operations, eliminate non-essential services, and optimize overall level of resources involved in achieving its goals.

Washtenaw County, Michigan*Principal Consultant*

- ◆ Organizational analysis
- ◆ Facilitation

Mr. Laycock has completed many projects spanning more than 15 years with the County. His first project involved a reorganization of human services. Since then he has conducted operational reviews for environmental services, the drain commission and the juvenile court. He worked on the integrated trial court organization and a range of other initiatives. He also worked with the newly elected Sheriff to develop a community policing strategy and implement extensive operational efficiencies. In addition, he lead a county-wide effort to integrate specialized police services including SWAT, hostage negotiations, canine units and a number of other functions. This effort was designed to improve county-wide deployment, eliminate duplication of costly limited-use services, and significantly reduce costs.

Michigan Supreme Court, State Court Administrative Office*Principal Consultant*

- ◆ Facilitation

Worked as facilitator for the SCAO Collections Advisory Committee, which is comprised of Judges and Court Administrators from around the state.

Mr. Robert L. Rosenkoetter, CPA Principal Consultant

Background

Mr. Robert Rosenkoetter, a Schumaker & Company associate, possesses more than 30 years of experience as a task and project manager and as a functional expert on management consulting engagements in the telecommunications, electric and gas utility, extractive, and service industries, as well as numerous national, state, and local governments.

He has designed, directed, and participated in performing management audits for utilities, public commissions, and government agencies throughout the United States and abroad. He has analyzed and evaluated organizations, designed and implemented accounting and information systems, and performed numerous analytical and financial reviews to reduce costs and improve effectiveness and efficiency.

He started his consulting career with Arthur Young & Company (now Ernst & Young) and worked in their USA and international practices, with long-term consulting assignments in Europe and Asia. Prior to beginning his consulting career, he was employed in the petrochemical industry, where he conducted budget and capital expenditure analysis.

Education & Certifications

Mr. Rosenkoetter earned both an MBA in Finance and a Master of Professional Accountancy (MPA) from Georgia State University, after receiving a BS in Business Administration from Auburn University. He is also a *Certified Public Accountant* (CPA).

Consulting Expertise

- ◆ Management/organizational and operations reviews and assessments
- ◆ Performance reviews and assessments
- ◆ Business process re-engineering and quality improvement program development
- ◆ Implementation of accounting and information systems
- ◆ Development of budgeting and financial forecasting processes
- ◆ Assessment of financial management functions and systems
- ◆ Litigation and regulatory support
- ◆ Identification of cost-reduction possibilities
- ◆ Productivity and work flow management improvement
- ◆ Strategic organization and business planning appraisal
- ◆ Project management

Agencies and Commissions Served

His management audit work has focused on financial management, budgeting and accounting functions, and cost allocations and affiliated transactions. He has worked for the following agencies.

California Public Utilities Commission
Connecticut Public Service Commission
D.C. Public Service Commission
Florida Dept. of Human Resources
Georgia Dept. of Human Resources
Government of Greece
Guam Public Utilities Commission
Illinois Commerce Commission
Kentucky Dept. of Human Resources
Kentucky Public Service Commission
Maryland Public Service Commission

New Jersey Board of Public Utilities
New Mexico Public Regulation Commission
New York Public Service Commission
North Carolina Social Services Department
Pennsylvania Public Utility Commission
Public Utilities Commission of Ohio
State of Maine
Tennessee Regulatory Authority
USAID
U.S. Trade Development Agency
World Bank

Expert Testimony

Mr. Rosenkoetter has provided written testimony in a review of coal procurement and delivery practices. Examples of consulting services include providing valuation reports (related to valuing electric utilities, water utilities, and utility assets), testimony in utility rate proceedings, and other litigation before regulatory commissions. Clients include Georgia Public Service Commission and United Cities Gas Company.



Utility Company Experience

Mr. Rosenkoetter has served as the *Project Manager, Lead Consultant, or Senior Consultant* for over 40 management and operations assessments and audits of public utilities. Some of Mr. Rosenkoetter's utility assignments are listed below:

Electric Utilities

CMS Energy	Guam Power Authority	Potomac Electric Power Company
Colorado Springs Utilities	Indianapolis Power & Light Company	Public Service Company of New Mexico
Commonwealth Edison Company	Jersey Central Power & Light	Puerto Rico Electric Power Authority
Dayton Power & Light Company	Nebraska Public Power District	Rockland Electric Company
Duke Energy Ohio, Inc.	Orange and Rockland Utilities	Sacramento Municipal Utilities District
Electricity of Vietnam (EVN)	Pacific Gas & Electric Company	San Diego Gas & Electric Company
El Paso Electric Company	PECO Energy Company	Sempra Energy
Florida Power Corporation	PLN (public power company of Indonesia)	Texas Utilities
Georgia Power Company	Potomac Edison Company	Russia's electric power industry

Gas Utilities

Boston Gas Company	Pacific Gas & Electric Company	San Diego Gas & Electric Company
Consolidated Natural Gas Company	PECO Energy Company	Southern California Gas Company
Equitable Gas Company	Pertamina Oil Company of Indonesia	United Cities Gas Company
National Fuel Gas Corporation	Philadelphia Gas Works	

WaterWastewater Utilities

Colorado Springs Utilities	Pennsylvania-American Water Company	Tennessee-American Water Company
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Telecommunications Utilities

Alltel Corporation	Guam Telephone Authority
Alltel of Pennsylvania	Illinois Bell Telephone Company
Bell South	Southern Bell Telephone Company
California Deaf & Disabled Telecommunications Program	Southern New England Telephone Company
Cincinnati Bell Telephone Company	Telephone Electronics Corporation
Contel of Illinois	United Telephone Company of Pennsylvania
Contel/GTE of New York	Verizon New York
GTE North – Illinois	Verizon Pennsylvania
GTE Pennsylvania	

Consulting Experience

Financial Management Experience

Mr. Rosenkoetter, CPA, has performed as *Lead Consultant* in this task area and analyzed, documented, and verified, through findings based on identifiable and measurable information and data financial management reviews. Financial management entails planning for the future of a business enterprise with the aim of ensuring a positive cash flow.

He has performed comprehensive reviews to examine the process of managing the financial resources, including accounting and financial reporting, budgeting, collecting accounts receivable, risk management, and insurance. He has examined the direct and indirect effects of borrowings and investments; short-term and long-term financial planning and analysis, budgeting, cash management, general accounting, property records, and tax management policies, procedures, and practices. And, thereby assessed the degree to which historical and projected activities have resulted in best practices.

Alltel Pennsylvania	GTE	PLN
California Deaf and Disabled	Guam Power Authority	Potomac Edison Company
Cincinnati Bell Telephone Company	Guam Telephone Authority	Public Service Company of New Mexico
City of Colorado Springs, CO	Illinois Bell Telephone Company	Rockland Electric
Colorado Springs Utilities	Jersey Central Power & Light	San Diego Gas & Electric
Company/ American Water	National Fuel Gas Company	Sempra Energy
Contel of Illinois	Orange and Rockland Utilities	Southern New England Telephone Company
Dayton Power & Light Company	PECO Energy Company/Exelon	Telecommunications Program
Duke Energy Ohio	Pennsylvania-American Water	Telephone Electronics Corporation
Equitable Gas Company/EQT	Philadelphia Gas Works	United Telephone of Pennsylvania
EVN (Electricity of Vietnam)		

Affiliate Interests and Cost Allocation Experience

Robert Rosenkoetter, CPA, has over 30 years of diverse management consulting experience. He has examined affiliate relationship and cost allocation issues at various publicly-owned utilities and public power agencies.

- ◆ Affiliate guidelines are established standards for procurement on competitive terms to govern a utility's procurement of goods, services, assets, and other utility resources. Mr. Rosenkoetter examines these guidelines with the objective of obtaining the best terms available for the utility and its customers.
- ◆ Cost allocation guidelines govern the allocation of costs associated with "shared corporate support and administrative services" which have been defined by the utility and may be shared with other companies/affiliates. Allocation methods should be shared by all corporate support and administrative functions.

His audit experience includes the full spectrum of functional reviews of gas, electric, water, and telephone utilities.

Alltel	Guam Power Authority	Rockland Electric
Cincinnati Bell Telephone Company	Guam Telephone Authority	SBC/Ameritech
Contel of Illinois	Jersey Central Power & Light	Sempra Energy
El Paso Electric Company	National Fuel Company	Southern California Gas Company
Equitable Gas Company/EQT	Orange and Rockland Utilities	Tennessee-American Water Company
Georgia Power Company	PECO Energy Company/Exelon	United Telephone of Pennsylvania
GTE		

Strategic and Business Planning Experience

According to known methodologies and global best practices, all company initiatives and projects must be aligned with the corporate strategy and business plan in order to maximize their effectiveness, produce real value and contribute to growth.

Mr. Rosenkoetter helps align organizational strategy, structure, controls, culture, and capability so that new futures are possible. During an engagement, his responsibilities may include the review of organizational units, policies, and systems relating to all accounting and finance functions.

City of Colorado Springs, CO	Jersey Central Power & Light	Tennessee-American Water Company
Fulton County, GA	Orange and Rockland Utilities	Verizon New York
GTE	Potomac Edison Company	



ISO Charges Analysis Experience

Utilizing a rigorous review, a corporate self-examination and reorganization can result in improved work processes and efficiencies, while reducing the independent system operator (ISO) charges to access the power grid.

Mr. Rosenkoetter's experience with ISO charge analysis has resulted in comprehensive corporate realignment intended to achieve top quartile performance, grid reliability, and efficiencies to reduce duplication and establish single-point accountability. Clients include Duke Energy Ohio, Inc. Specifically, Mr. Rosenkoetter's work with Midwest ISO included:

- ◆ Reviewing and reporting on costs incurred/revenues received
- ◆ Verifying consistency of costs/revenues with actual Midwest ISO invoices
- ◆ Verifying that charges, and all appropriate revenues, associated only with serving retail load customers are passing through
- ◆ Reviewing net congestion costs/revenues and net marginal losses
- ◆ Identifying issues and proposing recommendations

Productivity and Work Flow Management Improvement Experience

Mr. Rosenkoetter performed organizational and cost effectiveness evaluations of utility financial functions and departments. He developed detailed flowcharts of existing business process flows and formulated a listing of recommendations to take advantage of opportunities for improvement in efficiencies and cost effectiveness.

Other projects included recommendations for cost reduction planning and potential revenue enhancement initiatives based on process mapping and analysis of key processes for all departments in the city organization. Conducted focus groups with selected personnel from all departments to identify and evaluated problem areas.

City of Corpus Christi, TX

Commonwealth Edison

Verizon Pennsylvania

Fuels Management and Purchase Power/Fuels Clause Computations Experience

Mr. Rosenkoetter's specific fuels management experience includes work as a *Lead Consultant* with responsibilities in the review of bid solicitation and the evaluation process for procurement of coal, assessing the organizational separation of regulated and non-regulated affiliates in relation to the fuel procurement function, and preparing testimony for hearings. Fuel management systems are used to maintain, control and monitor fuel consumption and stock in any type of industry that uses transport, including rail, road, water and air, as a means of business. Mr. Rosenkoetter has assisted in reviews of various methods and technologies used to monitor and track fuel inventories, fuel purchases, and fuel dispensed. His consulting work has generated recommendations to improve management practices. The minimum tasks Mr. Rosenkoetter performs in the area of fuel clause computations include:

- ◆ Review computation of monthly fuel clause filings and determine their accuracy and documentation of the business process and support.
- ◆ Review compliance with the objectives to provide for adequate regulatory review of utility operations under its fuel clause, provide for the stability of utility earning when electric fuel costs and purchased power costs are rising, permit prompt credits to customers when electric fuel costs and purchased power costs are declining, and flow through to electricity users the increases and decreases in applicable fuel and purchased power costs per kWh of delivered energy above or below a base cost.

Review the monthly fuel clause filings and determine if there are accurate applicable kWh purchases and sales and that the base fuel and purchased power expense calculations are correct.

El Paso Electric Company

Duke Energy Ohio

Public Service Company of New Mexico

Dayton Power & Light Company

Georgia Power Company

Litigation and Regulatory Support Experience

Mr. Rosenkoetter provides litigation and regulatory support services in the areas of:

- ◆ Utility operations and practices
- ◆ Capital program planning and implementation
- ◆ Contracts, contracting, and contractor performance
- ◆ Affiliate interests and corporate/subsidiary relationships
- ◆ Regulatory and governance board management and compliance audits

As an example, Mr. Rosenkoetter has provided regulatory and litigation support to the State of Maine Public Advocate regarding Central Maine Power Company's credit and collection policies and standard offer uncollectible balances.

Information Technology and Financial Systems Experience

As a *Senior Practice Director* in the consulting group of Oracle Corporation Mr. Rosenkoetter managed a consulting department that was responsible for the implementation of Oracle software at major utility and communications companies in the eastern United States. Successful implementation engagements were completed for Bangor Hydro, Bangor, ME; Boston Gas Company, Boston, MA; CMS, Consolidated Natural Gas Company (CNG), Pittsburgh, PA; Dayton Power & Light, Dayton, OH; IPALCO (Indiana Power & Light Company), Indianapolis, IN; Louisville Gas & Electric, Louisville, KY; and PREPA (Puerto Rico Electric Power Authority), San Juan, Puerto Rico.

He was also the *Lead Consultant or Project Manager* for projects at clients listed in the left-hand column and as listed below:

- ◆ *Practice Manager* overseeing the implementation of financial systems at Bangor Hydro, Boston Gas Company, CMS, Consolidate Natural Gas Company (CNG), Dayton Power & Light, IPALCO, Louisville Gas & Electric, and PREPA (Puerto Rico Electric Power Authority).
- ◆ *Project Manager* in the design of a regulatory financial information system for the Russian electric power industry for USAID.

Oracle Corporation
City of Colorado Springs, CO

City of Corpus Christi, TX
Fulton County, GA

EVN (Electricity of Vietnam)



Assignment Experience

The following pages contain Mr. Rosenkoetter's relevant client list.

Electric Utility Assignments

<p>State of Maine Public Advocate <i>Executive Consultant & Expert Witness</i></p> <ul style="list-style-type: none"> ◆ Regulatory credit collection analysis ◆ Present evidence and recommendations 	<p>Provided regulatory and litigation support to the Public Advocate regarding Central Maine Power Company's credit and collection policies and standard offer uncollectible balances (Docket No. 2010-327). The Maine Public Utilities Commission (MPUC) staff has made a preliminary determination that the Company's actions led to a significant increase in its uncollectible balances and that some of its actions were imprudent. Specifically, the Public Advocate required expert consulting services to assist his staff in 1) evaluating the questions presented by the MPUC's notice of investigation and the staff bench analysis in this proceeding; 2) evaluating the Company's response to a bench analysis filed on June 24th; and 3) presenting evidence and recommendations before the MPUC and/or advice to the Public Advocate regarding these questions.</p>
<p>El Paso Electric Company <i>Executive Consultant II</i></p> <ul style="list-style-type: none"> ◆ Fuel clause computations ◆ Flue clause related policies, procedures, rules, cost allocations, and manuals 	<p>Assisted the New Mexico Public Regulation Commission (NMPRC) staff in a prudence review and audit of the fuel and purchased power cost adjustment clause (fuel clause) and related documentation of the electric business operations of El Paso Electric Company (EPE), specifically to provide professional auditing and prudence review services of EPE's fuel and purchased power costs, fuel clause filings and related documentation for the period of January 1, 2010 through December 31, 2010. This review investigated whether EPE's calculation of the fuel clause was accurate and the costs included in the fuel clause included only allowed costs and EPE's current accounting and internal control policies, management practices, and operational procedures, as they pertain to EPE's administration of the fuel clause, were effective and met related requirements.</p>
<p>Jersey Central Power & Light <i>Executive Consultant II</i></p> <ul style="list-style-type: none"> ◆ Affiliate relationships ◆ Affiliate cost allocation methodologies ◆ Remediation costs ◆ Recommendations and review of previous analysis ◆ Organizational structure ◆ Finance and cash management ◆ Accounting and property records ◆ Clean energy 	<p>Assisted the New Jersey Board of Public Utilities in an audit of the affiliated transactions between Jersey Central Power and Light (JCP&L) and its affiliates, and a comprehensive management audit of JCP&L. Task areas included an examination of affiliate relationships and cost allocation methodologies, executive management and corporate governance, organization structure, human resources, strategic planning, finance, accounting and property records, cash management, procurement and purchasing of energy, distribution and operation management, extensions and upgrades to provide regulated services, clean energy, market conditions, contractor performance, customer service, external relations, support services, and a review of actions taken by JCP&L regarding prior audits. As part of the audit, Schumaker & Company reviewed and assessed affiliate cost allocation methodologies to determine accounting and allocation procedures for separating the costs of inter-company transactions. Analysis determined if current accounting and allocation procedures were equitable, fair, and did not favor certain affiliates over JCP&L and its ratepayers. Additionally, examination assessed the electric generation policies, distribution policies, and assignment strategies of JCP&L and its affiliates.</p>
<p>Dayton Power & Light Company <i>Executive Consultant II</i></p> <ul style="list-style-type: none"> ◆ Finance and accounting ◆ Fuel rider calculations 	<p>Provided fuel cost recovery rider audit co-sourcing assistance to Dayton Power and Light Company (DP&L) to prepare DP&L for its annual review and audit to take place in the first quarter of 2011 for calendar year 2010. Items covered in the scope of work included fuel prices, allocation between wholesale and retail, sharing of gains and losses, coal handling costs, environmental compliance, PJM-related charges, power plant performance, and utility industry perspective.</p>

<p>Duke Energy Ohio <i>Executive Consultant II</i></p> <ul style="list-style-type: none">◆ Fuel clause computations◆ Financial review◆ Midwest ISO charges analysis	<p>Assisted the Public Utilities Commission of Ohio (PUCO) staff in a management/performance and financial audit of the fuel and purchased power and system reliability tracker riders of Duke Energy Ohio, Inc. Specifically, conducted an audit of the company's fuel costs (including any renewable energy costs) plus an audit of system reliability costs. This audit addressed the management/performance and financial aspects of the recovery mechanism. It consisted of a three-year audit cycle (2009-2011) with a complete and thorough audit being conducted in each year of the audit cycle. The initial audit included the actual cost for Rider PTC-FPP and SRT for the months January through December 2009.</p>
<p>Public Service Company of New Mexico <i>Executive Consultant II</i></p> <ul style="list-style-type: none">◆ Fuel clause computations◆ Financial review◆ Fuel clause related policies, procedures, and rules	<p>Assisted the New Mexico Public Regulation Commission (NMPRC) staff in a prudence review and audit of the fuel and purchased power cost adjustment clause (fuel clause) and related documentation of the electric business operations of Public Service Company of New Mexico (PNM). In specific, to provide professional auditing and prudence review services of PNM's fuel and purchased power costs, fuel clause filings and related documentation for the period of June 1, 2008 through June 30, 2009. This review provided documented evidence on the following:</p> <ul style="list-style-type: none">◆ PNM's calculation of the fuel clause is accurate and the costs included in the fuel clause include only allowed costs◆ PNM's current accounting and internal control policies, management practices, and operational procedures as they pertain to PNM's administration of the fuel clause are effective and meet related requirements
<p>Potomac Edison Company <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Organizational review◆ Accounting and finance function review	<p>Performed financial management audit of the Potomac Edison Company for the Maryland Public Service Commission. Responsibilities included the review of organizational units, policies, and systems relating to all accounting and finance functions.</p>
<p>PECO Energy Company <i>Executive Consultant II</i></p> <ul style="list-style-type: none">◆ Merger agreement compliance◆ Financial management◆ Affiliated interests	<p>Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including both electric and gas operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.</p>
<p>Sempra Energy <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Accounting and financial compliance and management◆ Affiliate interests	<p>Performed an affiliate compliance audit of Sempra Energy utilities, in which his responsibilities included assessing compliance by San Diego Gas & Electric Company and Southern California Gas Company with the affiliate transaction rules promulgated by the California Public Utilities Commission for the years ended December 31, 2005 and 2006, and addressing potential audit issues in the eight areas in which the CPUC has issued specific affiliate transaction rules.</p>
<p>Commonwealth Edison <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Capital costs review◆ Plant delivery◆ Policy and property	<p>Performed an original cost audit of Commonwealth Edison, in which his responsibilities included reviewing additions to ComEd's delivery electric utility plant over a 20-year period from 1985 to 2004, verifying the appropriateness of the recorded original cost and accumulated depreciation and determining that the capitalization policy, property unit catalog, and system for recording capital costs are appropriate and have been maintained and applied in a consistent manner.</p>

Georgia Power Company*Lead Consultant*

- ◆ Fuels management
- ◆ Affiliate interests
- ◆ Hearing testimony

Performed a prudency review of Georgia Power Company in the management of its coal contracts for the Georgia Public Service Commission. In specific to determine whether specific wrong-doings, inefficiencies, or imprudent practices occurred in the procurement and delivery of coal during 2003 and 2004. His responsibilities in this engagement included reviewing the bid solicitation and evaluation process for procurement of coal, assessing the organizational separation of regulated and non-regulated affiliates in relation to the fuel procurement function, and preparing testimony for hearings before the Georgia Public Service Commission (Docket No. 19142-U) in 2005.

Rockland Electric*Lead Consultant*

- ◆ Affiliate interests
- ◆ Accounting and financial management

Comprehensive management audit of Rockland Electric for the New Jersey Board of Public Utilities. Work included reviewing and assessing accounting and finance functions, organizations, systems, and documentation, including cost allocations with affiliated organization to determine the existence of cross-subsidization and to evaluate the efficiency and effectiveness of affiliate relationships.

Guam Power Authority*Lead Consultant*

- ◆ Affiliate interests
- ◆ Accounting and financial management

Performed a management audit of the Guam Power Authority for the Public Utilities Commission of the Territory of Guam. Work included the review and assessment of the finance and accounting functions, the CAM and all affiliate transactions of the local electric power utility on the island territory of Guam.

Orange and Rockland Utilities*Lead Consultant*

- ◆ Organizational review
- ◆ Affiliate interests
- ◆ Accounting and financial management

Performed an ethics oversight review of Orange and Rockland Utilities for the New Jersey Board of Public Utilities. This work included assessing the organizations, practices, and procedures governing all finance and accounting functions, as well as all transactions between affiliated entities and cost allocation transactions.

Colorado Springs Utilities*Senior Consultant*

- ◆ Cost allocations
- ◆ Accounting and financial management

Performed a management audit of the Colorado Springs Utilities for the City of Colorado Springs, including assessing all accounting and finance functions, systems, staffing, and activities, including cost allocations and the cost allocation manual and shared services and resources of the City and electric, gas, water, and waste-water utilities.

PLN*Senior Consultant*

- ◆ Accounting and financial management review

Performed a management review of PLN, the electric power company of Indonesia for the World Bank.

Gas Utility Assignments

<p>Equitable Gas Company <i>Executive Consultant II</i></p> <ul style="list-style-type: none">◆ Financial management◆ Affiliate interests	<p>Performed a stratified management and operations audit of Equitable Gas Company (EGC), a subsidiary of EQT Corporation, and its relationship with its affiliates. The primary focus of this management and operations audit are the business components of EGC that are still subject to regulation by the Pennsylvania Public Utility Commission, specifically EGC service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. The objectives include the determination of what improvements, if any, can be accomplished in the management and operations of EGC pursuant to Section 522(b) of the Public Utility Code 66 Pa. C.S. §522(b). Specifically, Schumaker & Company looked for economies, efficiencies, or improvements which benefit EGC and its ratepayers. In doing so, Schumaker & Company identifies which, if any, economically practical opportunities for cost saving measures and/or better service can be instituted.</p>
<p>Philadelphia Gas Works <i>Executive Consultant II</i></p> <ul style="list-style-type: none">◆ Financial management activities review	<p>Performed a stratified management and operations audit of Philadelphia Gas Works (PGW). The primary focus of this management and operations audit is to review those PGW business components subject to regulation by the PaPUC, specifically PGW service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of, efficiencies, or improvements which benefit PGW and its ratepayers. In doing so, Schumaker & Company identified which, if any, economically practical opportunities for cost saving measures can be instituted.</p>
<p>PECO Energy Company <i>Executive Consultant II</i></p> <ul style="list-style-type: none">◆ Merger agreement compliance◆ Financial management◆ Affiliated interests	<p>Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including both electric and gas operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.</p>
<p>San Diego Gas & Electric <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Accounting and financial management◆ Compliance testing	<p>Performed audit of San Diego Gas & Electric's Energy Efficiency Program expenses for the five year period from 1998 through 2002 for the California Public Utilities Commission.</p> <p>On a separate project, Mr. Rosenkoetter performed an audit of competition transition costs (CTC) of San Diego Gas & Electric Company. Work included testing compliance of the company's CTC application with state requirements and performing an assessment of recorded and unrecorded sunk costs and projections of future costs during the transition period.</p>
<p>National Fuel Gas Company <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Affiliate interests◆ Accounting and finance◆ Cost allocation methodology	<p>Performed a management audit of the National Fuel Gas Company for the Pennsylvania Public Utility Commission. Responsibilities consisted of reviewing and assessing finance and accounting functions, including affiliate transactions, cost allocation methodologies and assignment of cost between regulate and non-regulated activities and between parent organization and state utility operations.</p>
<p>United Cities Gas Company <i>Senior Consultant</i></p> <ul style="list-style-type: none">◆ Testimony preparation◆ Recommendation analysis and review	<p>Mr. Rosenkoetter supported the United Cities Gas Company in its defense of its cost allocation manual (CAM) and cost allocations to affiliated entities in a contested management audit with the Tennessee Regulatory Authority. Work consisted of reviewing and analyzing recommendations made and the company's responses and assisting in preparing testimony for the Tennessee Public Service Commission hearing.</p>



Southern California Gas Company*Senior Consultant*

- ◆ Affiliate interests
- ◆ Cost allocation modeling

Performed a focused management audit of Southern California Gas Company for the California Public Utilities Commission. Responsibilities included the review, analysis, and evaluations of the cost allocation model (CAM) and affiliate interests transactions between this utility and its parent holding company and other affiliated subsidiaries.

Water/Wastewater Utility Assignments

Six CA Water and Wastewater Agencies*Lead Consultant*

- ◆ Financial analyses of shared services opportunities

Participated in an utility service coordination/integration study for six water and wastewater agencies in the Tri-Valley area of northern California. Work included identifying ways the agencies could become more efficient in working together to deliver water, recycled water, flood control, and wastewater services.

Tennessee-American Water Company*Senior Consultant*

- ◆ Affiliate relationships
- ◆ Management effectiveness and cost competitiveness
- ◆ Cost accumulation and assignment – allocation methodologies
- ◆ Internal controls evaluation & sampling

Performed an affiliate audit of Tennessee-American Water Company (TAWC) at the request of the Tennessee Regulatory Authority (TRA). The audit included an investigation and assessment of the American Water Works Service Company management performance and decisions relating to internal processes and internal controls involving affiliate relationships and transactions, and the resulting recommendations of any management process changes needed for those controls and implementation. Further, the audit evaluated the charges allocated to TAWC, including the efficiency of processes and/or functions performed on behalf of TAWC, as well as the accuracy and reasonableness of the allocation factors utilized.

Pennsylvania-American Water Company*Executive Consultant II*

- ◆ Financial management activities review
- ◆ Customer service, billing, and collection functions

Performed a stratified management and operations audit of Pennsylvania-American Water Company (PAWC) for the Pennsylvania Public Utility Commission (PaPUC) with the primary focus areas being costs borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses are of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Telecommunications Assignments

<p>Verizon New York <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Organization and management◆ Capital and maintenance planning	<p>Analyzed, documented, and verified, through findings based on identifiable and measurable information and data, to ensure that Verizon NY's existing service quality plans and practices of the five VIP service objectives (customer trouble report rate, percent out of service over 24 hours, percent installation completed in five days, PSC complaints, and outliers), NY telephone service standards, and company guidelines meet applicable service quality performance standards, including reasonably foreseeable events and contingencies. Developed and documented recommendations to improve or modify these service quality practices and/or plans where existing plans and practices were not sufficient to ensure that applicable standards were met. Reviewed Verizon NY's processes for service quality performance and its employees, technology, and work processes related to the planning, design, construction, installation, maintenance, repair, and delivery of product to retail customers within Verizon NY's service territory.</p>
<p>Illinois Bell Telephone Company <i>Lead Consultant & Commission Advisor</i></p> <ul style="list-style-type: none">◆ Accounting and financial management	<p>Performed a management audit of the Illinois Bell Telephone Company for the Illinois Commerce Commission in which he advised commission auditors on the review and assessment of all finance and accounting functions, procedures, policies, and systems</p>
<p>Verizon Pennsylvania <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Network performance metrics◆ Data extraction procedures◆ Data storage, backup, retrieval/security; change management processes◆ Billing credits	<p>Performed a review and evaluation of the performance metrics and related remedies of Verizon Pennsylvania, Inc. (Verizon PA), as required by the Pennsylvania Public Utility Commission. Reviewed and evaluated performance metrics for eight different domains, specifically pre-ordering, ordering, provisioning, maintenance and repair, billing, network performance, operator services and general standards. This review and evaluation involved obtaining the source information from Verizon and replicating the information and calculations in a separate data warehouse using various technologies, such as Oracle 8i, SAS, and Microsoft SQL server tools. Developed computer code to represent the C2C performance metrics and worked with Verizon PA and the PaPUC to resolve differences identified.</p>
<p>SBC/Ameritech <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Affiliate interests and merger effects	<p>Performed a focused management audit of the effects of the SBC/Ameritech merger for the Illinois Commerce Commission. Responsibilities included assessing the appropriateness of SBC Illinois's affiliate transactions, cost allocations, and the separation of regulated and non-regulated activities</p>
<p>Southern New England Telephone Company <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Accounting and financial management	<p>Performed a focused management audit of the customer service functions of the Southern New England Telephone Company (SNET). Work included reviewing and assessing billing, credit, and collections organizations, policies, functions, and systems.</p>
<p>GTE <i>Lead Consultant</i></p> <ul style="list-style-type: none">◆ Affiliate interests◆ Accounting and financial management◆ Organization and management◆ Cost allocation practices	<p>Performed a management audit of GTE's northeastern regional telephone operations for the Illinois Commerce Commission. Work included assessing affiliated interest transactions and all finance and accounting policies, procedures, functions, and systems.</p> <p>On a separate project, Mr. Rosenkoetter performed a stratified management audit of GTE's telephone operations in the State of Pennsylvania for the Pennsylvania Public Utilities Commission. This work included the review and assessment of all organizations, policies, procedures, and systems relating to all finance, accounting and international functions, and also included the review of all transactions with affiliated entities, GTE's cost allocation practices and their cost allocation manual (CAM).</p>



Cincinnati Bell Telephone Company*Lead Consultant & Task Leader*

- ◆ Affiliate interests
- ◆ Accounting and financial management

Performed a management audit of Cincinnati Bell Telephone Company for the Kentucky Public Service Commission. Responsibilities included the review of organizational units, policies, procedures, and systems relating to all accounting and finance functions. He also served as a *Task Leader* in the review of transactions with affiliated entities.

Guam Telephone Authority*Lead Consultant*

- ◆ Affiliate interests
- ◆ Accounting and financial management

Performed a management audit of the Guam Telephone Authority for the Public Utilities Commission of Guam. Responsibilities included the review and assessment of the finance and accounting functions and transactions between affiliated entities.

California Deaf and Disabled Telecommunications Program*Lead Consultant*

- ◆ Accounting and financial management

Performed a management audit of the California Deaf and Disabled Telecommunications Program for the California Public Utilities Commission. Responsibilities included evaluating the finance and accounting policies, procedures, functions, processes, and systems.

United Telephone of Pennsylvania*Lead Consultant*

- ◆ Affiliate interests
- ◆ Collection and bad debt
- ◆ Accounting and financial management

Performed a management audit of United Telephone of Pennsylvania for the Pennsylvania Public Utility Commission. This work consisted of assessing policies, procedures, functions, and systems concerning affiliated transactions, collection and bad debt, and finance and accounting.

Telephone Electronics Corporation*Lead Consultant*

- ◆ Accounting and financial management

Performed a management audit of the Tennessee telephone operating companies of the Telephone Electronics Corporation for the Tennessee Regulatory Authority. Responsibilities included the review and assessment of organizational units, policies, procedures, and systems related to all finance and accounting functions.

Contel of Illinois*Lead Consultant*

- ◆ Affiliate interests
- ◆ Accounting and financial management

Performed a management audit of Contel of Illinois for the Illinois Commerce Commission. Responsibilities included reviewing and assessing all policies, procedures, practices, and systems relating to accounting and finance functions and transactions with affiliate organizations.

Alltel*Lead Consultant*

- ◆ Affiliate interests
- ◆ Accounting and financial management

Performed a management audit of Alltel of Pennsylvania for the Pennsylvania Public Utility Commission. Responsibilities included the review and assessment of all finance and accounting organizations, functions, policies, and procedures, as well as affiliated transactions.

Ms. Gail E. Stopar Support Consultant & Analyst

Background

Ms. Gail Stopar possesses 24 plus years of business and personnel management, corporate and academic training, software engineering, and technical writing experience in the computer, banking, and automotive industries. She has comprehensive experience in leading documentation and training areas and in composing, editing, and maintaining documents, databases, Web sites, and spreadsheets. Additionally, Ms. Stopar has extensive cross-functional experience in computer software/tools, quality methodology, and software engineering. Her experience has demonstrated her ability to interact and communicate effectively across all organizational levels, to develop and teach employees, management, and public courses, to work independently or as part of a team, to prioritize and problem-solve effectively during crunch times and/or while multi-tasking, and to service both internal and external customers. Prior to joining Schumaker & Company, she held various positions with Schoolcraft College, Digital Equipment Corporation, Program Planning Professionals, Inc., Software Services, Virtual Services, Inc., World Computer Corporation, Oakland County's Computer Services (MI), and Macomb County Schools Employees Credit Union (MI).

Education & Certifications

Ms. Stopar holds an MSA in Human Resource Management from Central Michigan University and a BS in Quality Management from Cleary University. She also holds an Associate in Liberal Arts with a concentration in Business/Computer Science from Schoolcraft College and a Certificate in Accounting from Oakland Community College.

Consulting Expertise

- ◆ Management and operations reviews and assessments
- ◆ Project management services
- ◆ Competitive analysis
- ◆ Finance support
- ◆ Human resources analysis
- ◆ Customer Service
- ◆ Support Services Benchmarking
- ◆ Workforce Management
- ◆ Affiliate relations and transactions

Professional Affiliations

- ◆ Microsoft Project Server Essentials Certification (2011)
- ◆ Microsoft Project Reporting Certification (2011)
- ◆ Microsoft Office Specialist core-certified in both Microsoft Project 2000 and Microsoft Outlook 2002, and expert-certified in Microsoft Word 2002
- ◆ Founder and current member of the Microsoft Project Users Group (now MPUG) – holding MPUGlobal Board of Directors position, 1997–2001
- ◆ Editor-in-Chief of *The Project Network Magazine*, the MPUGlobal quarterly publication, 1997–2001
- ◆ Adjunct Faculty for Schoolcraft College (MI) Continuing Education Services Business and Computer division, 2001–2006
- ◆ Member of Association of Proposal Management Professionals (APMP), 2004–2007

Articles Published

- ◆ *Business Continuity: Security Starts Within*, Executive Renaissance Forums Fall 2003 newsletter, *The Forum*

Utility Commission Experience

Additionally, Ms. Stopar has performed comprehensive and/or focused performance reviews for regulatory commissions and agencies, including:

New Jersey Board of Public Utilities	Pennsylvania Public Utility Commission	Tennessee Regulatory Authority
New York Public Service Commission	Public Utility Commission of Ohio	



Utility Company Experience

Some of Ms. Stopar's utility assignments are listed below:

Electric Utilities	Gas Utilities	Water/Wastewater Utilities
Duke Energy Ohio, Inc. Jersey Central Power and Light PECO Energy Company	Equitable Gas Company (EQT Corp.) Philadelphia Gas Works	Pennsylvania-American Water Company Tennessee-American Water Company Water Services Corporation of South Carolina
Telecommunications Utilities		
Verizon NY		

State & Local Government Experience

Ms. Stopar has performed comprehensive and/or focused performance reviews for numerous local and state government agencies. State government entities include New Jersey, New York, Ohio, Pennsylvania, and Tennessee. Local government entities include the City of Dearborn (MI) and the City of Detroit (MI).

Senior Management Experience

Ms. Stopar was a *Business Director* with Program Planning Professionals, Inc. (Pcubed) where she managed the General Motors North American business account and all of its program management specialists. Responsibilities included new business development, expanding existing contracts, developing new relationships and contract opportunities, and managing overall profitability and staff of the assigned business. Strategic internal corporate planning and multi-level client management interfacing developed the client account and coordinated/facilitated Pcubed's resources and payroll into a one million dollar annual revenue stream. Her human resource (HR) skills were invaluable in planning and developing ways to build organizational effectiveness, manage employee morale, build teams, and enhance productivity; while working to improve employee career development through designed and delivered training programs and HR initiatives. Her professional credibility in upholding corporate and client confidentiality with senior management level issues and employee personnel matters in accordance with all generally accepted, corporate and government standards has lead to efficient and productive work environments.

As a *Business Unit Manager*, Ms. Stopar established, marketed and managed Pcubed's interest in MPUG, the Microsoft Project Users Group, a Pcubed/Microsoft® corporate partnership. She was instrumental in the launch of MPUG as a recognized organization, MPUG's global growth, and building Pcubed's relationship with Microsoft. Management responsibility for all operational business functions with a full-time staff and 85 worldwide volunteer officers covering 11 regional chapters included membership communication, statistical reporting, maintenance, and tracking performed through database and web site technologies. Her delivery of technical support, networking opportunities, newsletters, and shared expertise to thousands of Microsoft® Project software users while marketing Pcubed strategic corporate planning was critical to provide sales leads and establish world-wide recognition of Pcubed's Project Management knowledge.

Consulting Experience

Project Management Experience

Ms. Stopar has participated as *Project Manager* on numerous projects for a variety of companies, as well as providing project management services. She has attended and taught numerous project management training courses, and is a member of the Microsoft Project Users Group (MPUG).

Most recently, she has used Microsoft Project 2007 for planning, scheduling, resource loading, reporting, and monitoring project progress.

With over 24 years of business experience, Ms. Stopar has been the *Project Manager* for many different assignments, including human resource management, quality reviews; training, software engineering, process improvement, and technology implementation projects.

In addition to the everyday project management of a *Business Unit Manager*, Ms. Stopar developed and delivered corporate training to staff and management professionals' in project management methodologies and tools (Primavera® and Microsoft® Project) as well as Project Management Institute (PMI) standards to fulfill career development goals. Corporate and Microsoft Project Users Group (MPUGlobal, now MPUG) member training was developed and delivered via Microsoft® events, user meetings, and scheduled class sessions.

As a *Software Engineer* for Digital Equipment Corporation, she designed, developed/programmed, and tested Computer Numerical Control (CNC) communications software (on/off-site), while providing in-depth U.S. product software technical support to companies like Westinghouse, Thiokol, EG&G, Boeing, and Cummins Engine. Major responsibilities included development and updating of project schedules, tracking online systems problems and corrections, and coordinating software releases. To establish open communications with a disbursed engineering team in France, U.S., Italy and Germany, she communicated software engineering activities, maintenance, and tracking through a working library database. Thereby, earning Ms. Stopar a 1989 Digital Equipment Corporation Software Services Excellence Award.

As an *Adjunct Faculty Member* for Schoolcraft College (MI) for six years, Ms. Stopar provided American Management Association (AMA) certification courses to the general public and all levels of computer courses for the Continuing Education Services division – many of which needed development.

Utility Management & Operations Audit Experience

Ms. Stopar has been a *Support Consultant* on many management and operations reviews. Her management audit work has focused on management and operations assessments and performance reviews; process analysis; affiliated transactions and cost allocations; customer satisfaction and needs assessments; and support services.

Project Standards and Consultant Support Experience

Schumaker & Company has created best practice standards for their professional audit teams. The standards include documented project procedures, a software platform, reporting guidelines and software macros, editorial styles and templates, and time reporting functions. Ms. Stopar is responsible for compliance with these standards for project documentation and final report preparations. She coordinates draft and final report production and assists all team consultants with editing and template issues. Her job is to make Schumaker & Company reports one voice and one look.

She also supports team consultants with any client interviews and report details that may need spreadsheet preparation, data analysis, research investigation, or tables and graphics.

Duke Energy Ohio	Pennsylvania-American Water Company	Tennessee-American Water Company
Equitable Gas Company	PECO Energy Company	Verizon Pennsylvania
Jersey Central Power & Light	Philadelphia Gas Works	Verizon New York

Data and Statistics Experience

Ms. Stopar has provided investigational assistance including data and statistics research and benchmarking analysis during operational reviews and management audits in order to gain perspective on organizational and financial performance. Statistical data for five or more years is collected and composed to either provide annual data and compound growth percentage in various functional areas, such as customer service and human resources, or to provide comparative analysis with a select industry group.

Ms. Stopar has used the *Federal Energy Regulatory Commission (FERC) Form No. 1: Annual Report of Major Electric Utilities, Licensees, Form No. 60, and Others*, *FERC Form No. 2: Annual Report for Major Natural Gas Companies*, and other public commission documents furnished by the regulated utility companies. Collected data include all line items from balance sheet, income statement, cash flows, plant in service, depreciation, depletion and amortization, taxes, salaries, operating revenue, sales, and number of customers, operation and maintenance expenses, environmental facilities and expenses, and much more.

In some cases performance measures/metrics or other quantitative assessments are necessary. This task includes document preparation and delivery.

City of Dearborn, Michigan
City of Detroit, Michigan
Equitable Gas Company

Jersey Central Power & Light
PECO Energy Company
Pennsylvania-American Water Company

Philadelphia Gas Works
Tennessee-American Water Company

Customer Service Experience

Utilities today face disruptive forces that challenge their ability to meet rising customer service standards; tightening operational budgets, increasing expectations on service levels, heightened regulatory scrutiny, economic distress and advancing technology. The dilemma is finding out which fundamentals matter most? Working smarter in customer operations begins with a deep understanding of customer behavior. Moving from experience-based decision-making to evidence-based decision-making can generate attractive benefits in improved performance outcomes, improved employee satisfaction and reduced risk. Utilities that rely heavily on customer analysis are taking the next step to develop optimization tools that enable scenario comparisons and determine optimal customer strategies.

Ms. Stopar assists Schumaker & Company executive consultants with interviews and investigative tasks during a management audit. In specific to customer service function, she examines customer contact centers, meter reading, billing, collections, and revenue protection. For each metric, there is a target for the year, with year-to-date results reported monthly.

Clients include Jersey Central Power & Light, Equitable Gas Company, and the City of Detroit, Michigan.

Finance Experience

As the accounting assistant, Ms. Stopar reviewed policies, audited controls, and maintained six accounts for reconciliation and daily teller balances for MCSECU. As part of an accounting department, Ms. Stopar managed the accounts payable system at World Computer Corporation. As the *Business Unit Manager* for MPUGlobal, she used QuickBooks software to control the membership accounting system.

She holds a one-year certificate in Accounting and on occasion assists Schumaker & Company financial consultants with investigative tasks during a management audit. Work experience includes:

- ◆ Macomb County Schools Employees Credit Union (MCSECU), Michigan
- ◆ World Computer Corporation
- ◆ MPUGlobal

Executive Management Experience

Ms. Stopar has a background that includes executive management responsibilities for new business development within major corporate sectors/accounts, expanding existing contracts, developing new relationships and contract opportunities, and managing overall profitability and staff of assigned business. She has managed budget planning for headcount, staff and client training, facilities, outside services, and marketing. She has initiated and/or led organizational improvement activities and coordinated business planning and project management efforts between program managers and customers while ensuring satisfaction. Work experience includes:

- ◆ Program Planning Professionals, Inc.
- ◆ Virtual Services, Inc.
- ◆ Digital Equipment Corporation

Human Resources Experience

With a Masters in Human Resources, Ms. Stopar has supported consulting efforts with the evaluation of the human resources functional organization, delineation of responsibilities, and authorities for effectiveness and efficiency on projects. This includes human resource policies and procedures to the extent to which managerial performance is vigorously assessed and corrective action is taken where warranted. The adequacy and implementation of compensation plans and how they relate to industry standards is benchmarked along with turnover rate and compensation per profession in comparison with

industry standards. Any anomalies that may be found are described. Training policies and practices are also reviewed. Clients include Water Services Corporation of South Carolina.

Technical Writing and Documentation Experience

With extensive background in the documentation task area, Ms. Stopar has ensured clarity, completeness, technical accuracy, electronic data entry, and quality of papers produced for more than 24 years. She is presently responsible for most supplemental sections of client/project reports (i.e. Data and Statistics), many internal documents of Schumaker & Company, and consultant support on any client documentation.

- ◆ As *Documentation Services Manager*, Ms. Stopar was responsible for strategic departmental planning relating to contract work for Ford Motor Company, internal and external customers, and multimedia/Web development. Her focus has lain on working with clients, like the Ford Fairlane Training & Development Center (FTDC), to ensure training and documentation efforts were kept to their standards during new or revised project efforts and therefore produced best-in-class results. She has supported management and human resource initiatives regarding policy and procedure development, job description development, International Standards Organization (ISO) 9000 certification process project endeavors, and design and development of course materials including hardcopy and electronic help. Her direct reports included Technical Writers, Instructional Systems Designers, and Multimedia Technicians.
- ◆ As *Senior Technical Writer*, Ms. Stopar has performed as team lead for product engineering writer staff, has developed work statements and large-scale proposals for field sales teams, has created custom project engineering quotes, estimates, test plans, schedules and functional specifications for new sales, and has documented new or existing software products. During an effort to coordinate Digital Equipment Corporation's U.S. engineering writer process for standardized writing methodology, Ms. Stopar received a Corporate Team Recognition Award.
- ◆ As *Editor-in-Chief* of *The Project Network Magazine*, the MPUGlobal organization's quarterly publication for three-plus years, Ms. Stopar was responsible for membership communication. All articles, advertising, graphics, and announcements were written, reviewed, and/or edited by her.

Jersey Central Power & Light

Duke Energy Ohio

Tennessee-American Water Company

Equitable Gas Company

Philadelphia Gas Works

Pennsylvania-American Water Company

City of Detroit, Michigan

Water Services Corporation of South Carolina

PECO Energy Company

Verizon New York

City of Dearborn

Program Planning Professionals, Inc. (Pcubed)

MPUGlobal

Software Services

Digital Equipment Corporation

Virtual Services, Inc.

World Computer Corporation

Oakland County, Michigan



Assignment Experience

The following pages contain Ms. Stopar's relevant client list.

Electric Utility Assignments

Jersey Central Power & Light

Support Consultant and Analyst

- ◆ Recommendations and review of previous analysis
- ◆ Customer services
- ◆ Data and statistics research and benchmarking analysis
- ◆ Team consultant support with any report details that may need spreadsheet preparation, data analysis, research investigation, or tables and graphics

Assisted the New Jersey Board of Public Utilities in an audit of the affiliated transactions between Jersey Central Power and Light Company and its affiliates, and a comprehensive management audit of Jersey Central Power and Light Company (JCP&L).

Schumaker & Company reviewed and assessed affiliate cost allocation methodologies to determine accounting and allocation procedures for separating the costs of inter-company transactions. Analysis determined if current accounting and allocation procedures were equitable, fair, and did not favor certain affiliates over JCP&L and its ratepayers. Additionally, examination assessed the electric generation policies, distribution policies, and assignment strategies of JCP&L and its affiliates. This audit included an examination of affiliate relationships and cost allocation methodologies, executive management and corporate governance, organization structure, human resources, strategic planning, finance, accounting and property records, cash management, procurement and purchasing of energy, distribution and operation management, extensions and upgrades to provide regulated services, clean energy, market conditions, contractor performance, customer service, external relations, support services, and a review of actions taken by JCP&L regarding prior audits.

Duke Energy Ohio

Support Consultant, Analyst & Editor

- ◆ Team consultant support with any report details that may need spreadsheet preparation, data analysis, research investigation, or tables and graphics
- ◆ Document standards compliance, preparation and delivery

Assisted the Public Utilities Commission of Ohio (PUCO) staff in a management/performance and financial audit of the fuel and purchased power and system reliability tracker riders of Duke Energy Ohio, Inc. Specifically, conducted an audit of the company's fuel costs (including any renewable energy costs) plus an audit of system reliability costs. This audit addressed the management/performance and financial aspects of the recovery mechanism. It consisted of a three-year audit cycle (2009-2011) with a complete and thorough audit being conducted in each year of the audit cycle. The initial audit included the actual cost for Rider PTC-FPP and SRT for the months January through December 2009.

PECO Energy Company

Consultant, Editor, and Analyst

- ◆ Data and statistics research and benchmarking analysis
- ◆ Focused analyses in various functional areas
- ◆ Document preparation and delivery

Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including both electric and gas operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Gas Utility Assignments

Equitable Gas Company

Consultant, Analyst, & Editor

- ◆ Data and statistics research and benchmarking analysis
- ◆ Focused analyses in various functional areas, such as customer service and human resources
- ◆ Document preparation and delivery

Performed a stratified management and operations audit of Equitable Gas Company (EGC), a subsidiary of EQT Corporation, and its relationship with its affiliates. The primary focus of this management and operations audit are the business components of EGC that are still subject to regulation by the Pennsylvania Public Utility Commission, specifically EGC service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. The objectives include the determination of what improvements, if any, can be accomplished in the management and operations of EGC pursuant to Section 522(b) of the Public Utility Code 66 Pa. C.S. §522(b). Specifically, Schumaker & Company looked for economies, efficiencies, or improvements which benefit EGC and its ratepayers. In doing so, Schumaker & Company identifies which, if any, economically practical opportunities for cost saving measures and/or better service can be instituted.

Philadelphia Gas Works

Consultant, Analyst, & Editor

- ◆ Data and statistics research and benchmarking analysis
- ◆ Focused analyses in various functional areas, such as human resources
- ◆ Document preparation and delivery

Performed a stratified management and operations audit of Philadelphia Gas Works (PGW). The primary focus of this management and operations audit is to review those PGW business components subject to regulation by the PaPUC, specifically PGW service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of, efficiencies, or improvements which benefit PGW and its ratepayers. In doing so, Schumaker & Company identified which, if any, economically practical opportunities for cost saving measures can be instituted.

PECO Energy Company

Consultant, Editor, and Analyst

- ◆ Data and statistics research and benchmarking analysis
- ◆ Focused analyses in various functional areas
- ◆ Document preparation and delivery

Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including both electric and gas operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.



Water/Wastewater Utility Assignments***Tennessee-American Water Company****Consultant & Analyst*

- ◆ Team consultant support with any report details that may need spreadsheet preparation, data analysis, research investigation, or tables and graphics
- ◆ Internal controls evaluation & sampling
- ◆ Document preparation and delivery

Performed an affiliate audit of Tennessee-American Water Company (TAWC) at the request of the Tennessee Regulatory Authority (TRA). The audit included an investigation and assessment of the American Water Works Service Company management performance and decisions relating to internal processes and internal controls involving affiliate relationships and transactions, and the resulting recommendations of any management process changes needed for those controls and implementation. Further, the audit evaluated the charges allocated to TAWC, including the efficiency of processes and/or functions performed on behalf of TAWC, as well as the accuracy and reasonableness of the allocation factors utilized.

Water Services Corporation of South Carolina*Consultant*

- ◆ Human resource policies and procedures
- ◆ Turnover rates and compensation
- ◆ Training policies and practices

Performed a management and operations review and assessment of Water Services Corporation (WSC) of South Carolina for the State of South Carolina Office of Regulatory Staff (ORS) with specific focus on the operations of the five subsidiary water and wastewater companies that operate in South Carolina:

- ◆ Carolina Water Service, Inc. (CWS)
- ◆ Tega Cay Water Service, Inc. (TCWS)
- ◆ Utilities Services of South Carolina, Inc. (USSC)
- ◆ Southland Utilities, Inc. (SU)
- ◆ United Utility Companies, Inc. (UUC)

The bottom line of this project was to determine whether the rates charged to the South Carolina ratepayers can be reduced through the implementation of greater efficiencies in organizations, operations, or both. Additionally, another relevant analysis was a determination of whether the ratepayers of South Carolina were being properly and economically served by the range of corporate services that are provided to the WSC operations in South Carolina by the managers located in both West Columbia and Northbrook. Significant consideration was given to investigation of the potential benefits that would result from the consolidation or merger of WSC's affiliated companies.

Pennsylvania-American Water Company*Consultant, Analyst, & Editor*

- ◆ Data and statistics research and benchmarking analysis
- ◆ Focused analyses in various functional areas
- ◆ Document preparation and delivery

Performed a stratified management and operations audit of Pennsylvania-American Water Company (PAWC) for the Pennsylvania Public Utility Commission (PaPUC) with the primary focus areas being costs borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses are of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Telecommunications Assignments

Verizon New York

Analyst & Editor

- ◆ Document management and administration
- ◆ Quality control
- ◆ Report preparation

Documented the findings based on identifiable and measurable information/data, to ensure that Verizon NY's existing service quality plans/practices of the five VIP service objectives (customer trouble report rate, percent out of service over 24 hours, percent installation completed in five days, Public Service Commission (PSC) complaints, and outliers), NY Telephone Service Standards, and company guidelines meet applicable service quality performance standards, including reasonably foreseeable events and contingencies. Compiled, wrote, and coordinated input from ten consultants to produce final reports delivered to the PSC.

Municipal Assignments

City of Detroit, Michigan

Consultant and Analyst

- ◆ Data research and investigation (public works)
- ◆ Performance measures/metrics or other quantitative assessments (public works)

Recommended cost reduction planning and potential revenue enhancement initiatives based on process mapping and analysis of key processes for designated departments (fire and public works, plus potentially reviewing police, transportation, and health/ wellness promotion in future months). These plans/initiatives address risks associated with implementation, not only within the designated departments, but especially its potential impact on the delivery of services to the residents and surrounding communities.

City of Dearborn, Michigan

Analyst

- ◆ Camp Dearborn

Provided investigational assistance for an operations review and assessment of Camp Dearborn that included reviewing all key positions, evaluating staffing levels, reviewing operating revenues and expenditures and business policies, and more.



Ms. Jaye M. Kain

Project Administrator & Analyst

Background

Ms. Jaye M. Kain has over 20 years of business experience. Her background, which includes a blend of experience in project administration and management, training, scientific research, and grant writing, provides her with a unique perspective from which to manage investigations and evaluate their findings. Her communication skills make her a natural facilitator for the assimilation of data produced by seemingly disparate specialties.

Education & Certifications

Ms. Kain holds one Bachelor's degree in Environmental Geoscience and a second Bachelor's degree in Geology from Edinboro University of Pennsylvania. She also holds a Master of Science in Geology from the University of Michigan.

Consulting Expertise

Ms. Kain served as the *Project Administrator* on many of Schumaker & Company's consulting assignments. Ms. Kain has served as a *Project Director* for a variety of programs. Her focus lay primarily on scientific grants funded by state and federal programs such as the Department of Energy, the Environmental Protection Agency, and the Department of Natural Resources. After a grant was awarded, organizations contracted Ms. Kain to oversee the spending and subsequent reporting to the appropriate agency(ies). This tendency created a situation whereby Ms. Kain had the opportunity to establish a long-term relationship with the clients and to act on their behalf and in their best interest.

In the case of the City of Ecorse, Michigan, as money flowed in, residents and business owners became interested in applying for more funds. The contract became long-term and has, at last count, eight people assigned to procuring and managing the grant programs.

Professional Affiliations

- ◆ International Association of Geochemistry
- ◆ Geological Society of America
- ◆ Association of Women Geologists

Business Experience

Prior to joining Schumaker & Company, Ms. Kain was with:

- ◆ Neighborhood Funding Resources, Michigan as *Lead Grant Writer & Project Director* – a corporation established to assist cities in obtaining federal funding for community based projects.
- ◆ The Ann Arbor IT Zone, Michigan as *Manager* – a non-profit organization dedicated to helping local entrepreneurs and information technology professionals.
- ◆ The Richard Hale Shaw Group, Michigan as *Business Manager* – where she was more specifically the operations manager and performed business development/marketing for a group of developers and trainers in programming languages.



Consulting Experience

Project Administration and Support Experience

A project must be well planned and managed to ensure that the client's objectives are realized and to prevent disruption of the subject entity's operations. In the conduct of comprehensive and focused management and operations audits, Ms. Kain manages the Schumaker & Company project platform built to address both technical and administrative issues during the course of any project. To this end, Schumaker & Company is dedicated to ensuring that a thorough, detailed work plan is developed and executed, and that the project is completed on schedule, within budget.

Combining Internet/computer technology, Schumaker & Company developed a package of tools which enhanced collaboration with document management and issue tracking. Ms. Kain uses conventional, as well as the Schumaker & Company proprietary, project management and control tools and techniques to maintain data integrity, track interview and information requests, establish specific consultant and client interview times and confirmations, send information requests and reports electronically, and organize document filing/retrieval through a built-in cross-referencing system between the database and paper files.

Dayton Power & Light Company
Duke Energy Ohio
El Paso Electric Company
Equitable Gas Company/EQT
Jersey Central Power & Light
Michigan Public Service Commission

Nova Scotia Power Incorporated
Pennsylvania-American Water Company/American Water
PECO Energy Company/Exelon
Philadelphia Gas Works
Tennessee-American Water Company/American Water
Water Services Corporation of South Carolina

Documentation Experience

Ms. Kain also has significant experience and expertise in the area of documentation control. She has served as document specialist for numerous organizations and implemented the initial system documentation for an investor driven start-up. Additionally, she has been responsible for the project's subcontracting and subsequent reporting to federal agencies and is well acquainted with federal and international standards.

City of Ecorse, Michigan
Duke Energy Ohio
Equitable Gas Company/EQT
Friends of the Detroit River, Dearborn, Michigan
PECO Energy Company/Exelon
Pennsylvania-American Water Company/American Water

Philadelphia Gas Works
Tennessee-American Water Company/American Water
U.S. Green Building Council, Michigan
Urban Farming, Detroit, Michigan
Water Services Corporation of South Carolina

Analytical Support Experience

Ms. Kain provides Schumaker & Company with analytical support for diagnostic review of functional areas and in-depth analyses of pre-identified project issues. Analytical work performed on Schumaker & Company projects can be robust and fit for purpose, but Ms. Kain's ability to quickly adapt and respond to changing business focus helps projects stay the course.

Duke Energy Ohio
Equitable Gas Company/EQT
Nova Scotia Power Incorporated
PECO Energy Company/Exelon

Pennsylvania-American Water Company/American Water
Philadelphia Gas Works
Tennessee-American Water Company/American Water
Water Services Corporation of South Carolina

Assignment Experience

The following pages contain Ms. Kain's relevant client list.

Electric Utility Assignments

Nova Scotia Power Incorporated

Project Administrator & Analyst

- ◆ Project administration and support
- ◆ Analytical support

Assisted Nova Scotia Power Incorporated (NSPI) in undertaking an audit to examine the solid fuel inventory management function and provide meaningful recommendations for improvement. The review addressed adherence to good utility practice and consistency with the policies and procedures governing fuel management as described in the NSPI Fuel Manual. The scope of the audit included testing the assertions of existence and valuation and an examination of access control for NSPI's coal inventory. The process audited spanned the receipt of the physical inventory through to financial reporting, with a particular focus on adjustments and/or discrepancies between the physical inventory and the inventory records.

Michigan Public Service Commission

Project Administrator

- ◆ Project administration and support

Assisted the Regulated Energy Division of the Michigan Public Service Commission by verifying that the requirements of Section 11, Public Act No. 286 of 2008 are being satisfied beginning with rate case orders issued after January 1, 2009 for each electric utility in the state, including Detroit Edison, Consumers Energy, Upper Peninsula Power Company, Wisconsin Electric Power Company, Alpena Power Company, and Indiana Michigan Power. Regulated energy utilities file rate cases with the Commission for approval. The Commission issues an order after reviewing the testimony and exhibits of the utility, interveners and the Commission staff. Subsection (1) of Section 11 of PA 286 requires the Commission to phase in electric rates equal to the cost of providing service to each customer class over a period of five years from the effective date of this act unless an exception is met. Therefore, for each regulated electric utility with more than one million retail customers (Consumers Energy and Detroit Edison), the MPSC is phasing in electric rates equal to the cost of providing service to each customer class before October 2013. For each regulated electric utility with less than one million retail customers (all others in Michigan), as mentioned in Subsection (2) as an exception, the phase-in period for cost-of-service rates can exceed five years.

El Paso Electric Company

Project Administrator

- ◆ Project administration and support
- ◆ Analytical support

Assisted the New Mexico Public Regulation Commission (NMPRC) staff in a prudence review and audit of the fuel and purchased power cost adjustment clause (fuel clause) and related documentation of the electric business operations of El Paso Electric Company (EPE), specifically to provide professional auditing and prudence review services of EPE's fuel and purchased power costs, fuel clause filings and related documentation for the period of January 1, 2010 through December 31, 2010. This review investigated whether EPE's calculation of the fuel clause was accurate and the costs included in the fuel clause included only allowed costs and EPE's current accounting and internal control policies, management practices, and operational procedures, as they pertain to EPE's administration of the fuel clause, were effective and met related requirements.

Dayton Power & Light Company

Project Administrator & Support Consultant

- ◆ Project administration and support
- ◆ Analytical support

Provided fuel cost recovery rider audit co-sourcing assistance to Dayton Power and Light Company (DP&L) to prepare DP&L for its annual review and audit to take place in the first quarter of 2011 for calendar year 2010. Items covered in the scope of work included fuel prices, allocation between wholesale and retail, sharing of gains and losses, coal handling costs, environmental compliance, PJM-related charges, power plant performance, and utility industry perspective.



Jersey Central Power & Light*Project Administrator*

- ◆ Project administration and support
- ◆ Analytical support

Assisted the New Jersey Board of Public Utilities in an audit of the affiliated transactions between Jersey Central Power and Light Company and its affiliates, and a comprehensive management audit of Jersey Central Power and Light Company (JCP&L).

Schumaker & Company reviewed and assessed affiliate cost allocation methodologies to determine accounting and allocation procedures for separating the costs of inter-company transactions. Analysis determined if current accounting and allocation procedures were equitable, fair, and did not favor certain affiliates over JCP&L and its ratepayers. Additionally, examination assessed the electric generation policies, distribution policies, and assignment strategies of JCP&L and its affiliates. This audit included an examination of affiliate relationships and cost allocation methodologies, executive management and corporate governance, organization structure, human resources, strategic planning, finance, accounting and property records, cash management, procurement and purchasing of energy, distribution and operation management, extensions and upgrades to provide regulated services, clean energy, market conditions, contractor performance, customer service, external relations, support services, and a review of actions taken by JCP&L regarding prior audits.

Duke Energy Ohio*Project Administrator & Analyst*

- ◆ Project administration and support
- ◆ Analytical support for diagnostic review of functional areas and in-depth analyses of pre-identified issues

Assisted the Public Utilities Commission of Ohio (PUCO) staff in a management/performance and financial audit of the fuel and purchased power and system reliability tracker riders of Duke Energy Ohio, Inc. Specifically, conducted an audit of the company's fuel costs (including any renewable energy costs) plus an audit of system reliability costs. This audit addressed the management/performance and financial aspects of the recovery mechanism. It consisted of a three-year audit cycle (2009-2011) with a complete and thorough audit being conducted in each year of the audit cycle. The initial audit included the actual cost for Rider PTC-FPP and SRT for the months January through December 2009.

Public Service Company of New Mexico*Project Administrator & Support Consultant*

- ◆ Project administration and support
- ◆ Analytical support for diagnostic review of functional areas and in-depth analyses of pre-identified issues

Assisted the New Mexico Public Regulation Commission (NMPRC) staff in a prudence review and audit of the fuel and purchased power cost adjustment clause (fuel clause) and related documentation of the electric business operations of Public Service Company of New Mexico (PNM). In specific, to provide professional auditing and prudence review services of PNM's fuel and purchased power costs, fuel clause filings and related documentation for the period of June 1, 2008 through June 30, 2009. This review provided documented evidence on the following:

- ◆ PNM's calculation of the fuel clause is accurate and the costs included in the fuel clause include only allowed costs
- ◆ PNM's current accounting and internal control policies, management practices, and operational procedures as they pertain to PNM's administration of the fuel clause are effective and meet related requirements

PECO Energy Company*Project Administrator & Analyst*

- ◆ Project administration and support
- ◆ Analytical support for diagnostic review of functional areas and in-depth analyses of pre-identified issues

Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including both electric and gas operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.

Gas Utility Assignments

Equitable Gas Company

Project Administrator & Analyst

- ◆ Project administration and support
- ◆ Analytical support for diagnostic review of functional areas and in-depth analyses of pre-identified issues

Performed a stratified management and operations audit of Equitable Gas Company (EGC), a subsidiary of EQT Corporation, and its relationship with its affiliates. The primary focus of this management and operations audit are the business components of EGC that are still subject to regulation by the Pennsylvania Public Utility Commission, specifically EGC service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. The objectives include the determination of what improvements, if any, can be accomplished in the management and operations of EGC pursuant to Section 522(b) of the Public Utility Code 66 Pa. C.S. §522(b). Specifically, Schumaker & Company looked for economies, efficiencies, or improvements which benefit EGC and its ratepayers. In doing so, Schumaker & Company identifies which, if any, economically practical opportunities for cost saving measures and/or better service can be instituted.

Philadelphia Gas Works

Project Administrator & Analyst

- ◆ Project administration and support
- ◆ Analytical support for diagnostic review of functional areas and in-depth analyses of pre-identified issues

Performed a stratified management and operations audit of Philadelphia Gas Works (PGW). The primary focus of this management and operations audit is to review those PGW business components subject to regulation by the PaPUC, specifically PGW service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of, efficiencies, or improvements which benefit PGW and its ratepayers. In doing so, Schumaker & Company identified which, if any, economically practical opportunities for cost saving measures can be instituted.

PECO Energy Company

Project Administrator & Analyst

- ◆ Project administration and support
- ◆ Analytical support for diagnostic review of functional areas and in-depth analyses of pre-identified issues

Performed a stratified management and operations audit of PECO Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being PECO, Exelon Energy Delivery (EED), and Exelon Business Services Company (EBSC) functional areas, whose costs are borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues (including both electric and gas operations) assessed the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.



Water/Wastewater Utility Assignments

<p>Tennessee-American Water Company <i>Project Administrator</i></p> <ul style="list-style-type: none"> ◆ Project administration and support ◆ Analytical support 	<p>Performed an affiliate audit of Tennessee-American Water Company (TAWC) at the request of the Tennessee Regulatory Authority (TRA). The audit included an investigation and assessment of the American Water Works Service Company management performance and decisions relating to internal processes and internal controls involving affiliate relationships and transactions, and the resulting recommendations of any management process changes needed for those controls and implementation. Further, the audit evaluated the charges allocated to TAWC, including the efficiency of processes and/or functions performed on behalf of TAWC, as well as the accuracy and reasonableness of the allocation factors utilized.</p>
<p>Pennsylvania-American Water Company <i>Project Administrator & Analyst</i></p> <ul style="list-style-type: none"> ◆ Project administration and support ◆ Analytical support for diagnostic review of functional areas and in-depth analyses of pre-identified issues 	<p>Performed a stratified management and operations audit of Pennsylvania-American Water Company (PAWC) for the Pennsylvania Public Utility Commission (PaPUC) with the primary focus areas being costs borne ultimately by Pennsylvania ratepayers. Schumaker & Company's diagnostic review of functional areas and in-depth analyses of pre-identified issues assess the condition of each functional area or business unit against evaluative criteria or expected business practice to determine if appropriate management controls, processes, and systems were in place. These analyses are of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any.</p>
<p>Water Services Corporation of South Carolina <i>Project Administrator & Analyst</i></p> <ul style="list-style-type: none"> ◆ Project administration and support ◆ Analytical support 	<p>Performed a management and operations review and assessment of Water Services Corporation (WSC) of South Carolina for the State of South Carolina Office of Regulatory Staff (ORS) with specific focus on the operations of the five subsidiary water and wastewater companies that operate in South Carolina, those being:</p> <ul style="list-style-type: none"> ◆ Carolina Water Service, Inc. (CWS) ◆ Tega Cay Water Service, Inc. (TCWS) ◆ Utilities Services of South Carolina, Inc. (USSC) ◆ Southland Utilities, Inc. (SU) ◆ United Utility Companies, Inc.(UUC) <p>The bottom line of this project was to determine whether the rates charged to the South Carolina ratepayers can be reduced through the implementation of greater efficiencies in organizations, operations, or both. Additionally, another relevant analysis was a determination of whether the ratepayers of South Carolina are being properly and economically served by the range of corporate services that are provided to the WSC operations in South Carolina by the managers located in both West Columbia and Northbrook. Significant consideration was given to investigation of the potential benefits that would result from the consolidation or merger of the affiliated companies of WSC.</p>

B. Firm Qualifications

Schumaker & Company is a management consulting and professional services firm committed to assisting utilities and telecommunications firms, state and local governments, and companies in the manufacturing and service industries. The qualifications are organized as follows:

Firm Background.....	B-1
Ability to Respond Rapidly.....	B-2
Our People.....	B-2
Managing Change, Defining Solutions	B-3
Firm Innovation and Sound Recommendations.....	B-5
Prior Utility Experience.....	B-6
Typical Projects.....	B-9
Testimony by Schumaker & Company Staff.....	B-12
Sample Audit Reports.....	B-12
Client List.....	B-13
Prior Experience	B-14

Firm Background

Since our inception as a Michigan corporation in 1986, Schumaker & Company has continually expanded our scope of services. Currently, our consultants provide expertise in strategy, management and operations assessments and reviews, business process reengineering and quality improvement, project management and quality assurance, technology implementation, and competitive assessments and customer surveys. We are an employee-owned firm and a certified woman-owned business in Michigan, Pennsylvania, New Jersey, North Carolina (HUB), California, Illinois, Delaware, and Wayne County (Michigan). To better support our national client base, Schumaker & Company maintains offices in four strategic locations across the country, specifically:

Ann Arbor Headquarters
3101 Walnut Ridge Drive
Ann Arbor, MI 48103
(734) 998-5550

Philadelphia Regional Office
28 South State Street
Newtown, PA 18940
(215) 968-3455

Austin Regional Office
111 Whirlwind Cove
Georgetown, TX 78633
(800) 769-5813

Atlanta Regional Office
10085 Buice Road
Johns Creek, GA 30022
(800) 769-5813

Nation Wide Contact
(734) 998-5590 (fax)
solutions@schuco.com

*Managing Change,
Defining Solutions*

Schumaker & Company is results-oriented. Our goal is to bring about practical improvement, not propose academic theoretical scenarios. We focus on the implementation of solutions. We have a dual perspective: determining the right

solutions (based on objective analysis) and devising a framework to get from here to there – in other words, a way to manage the change.

Ability to Respond Rapidly

At Schumaker & Company, we take pride in the fact that we can provide rapid senior management response to a wide variety of client needs. Our culture, size, and use of the latest technology give us a flexibility that our competitors envy. Our consultants and staff hold a depth and breadth of experience that allows us to provide our clients with a final work product in a reasonable timeframe. Having such a knowledgeable team on our side also affords us the opportunity to commit to meeting our clients' timeframe, not ours. In addition, we have demonstrated our ability to respond creatively to challenges or obstacles that arise during the course of any project.

Our People

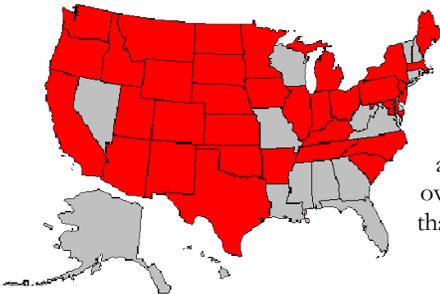
Schumaker & Company draws on a unique blend of functional knowledge and hands-on management experience. Our senior consultants have extensive experience in management, operations, and technology consulting in a project environment. They typically hold advanced degrees and average more than 25 years of professional experience. Our project team members are experts in the technical aspects of electric, gas, water, and telecommunications operations, as well as relevant regulatory proceedings. This combined knowledge base renders our firm uniquely qualified for the most complex and demanding assignments.

Many of our consultants are *Certified Management Consultants (CMCs)*,¹ *Project Management Professionals (PMPs)*,² *Certified Public Accountants (CPAs)*,³ *Professional Engineers (PEs)*, *Microsoft Certified Professionals (MCPs)*,⁴ *Microsoft Certified System Engineers (MCSEs)*, or *Microsoft Certified Systems Developers (MCSDs)*. Schumaker & Company is also a *Microsoft Channel Partner*. Our corporate culture is fast moving, technologically advanced, and readily adapted to meet a variety of client needs.

Certified Management Consultants (CMC®s) – A CMC® is not just any consultant. This is probably the only proposal that you will receive where all of the *Lead Consultants* are *Certified Management Consultants* as certified by the Institute of Management Consultants USA (IMC USA), an ISO/IEC 17024 certifying body for its CMC® certification process, which confirms a consultant's education, continuing professional development, and commitment to the highest ethical standards. IMC USA's examiners rigorously assess the consulting engagements and competence of applicants and their ability to apply the knowledge and skills defined in IMC USA's competency framework and certification scheme. This certification mark represents evidence of the highest standards of consulting and adherence to the ethical canons of the profession. Less than 1% of all consultants have achieved this level of performance. As our officers are CMC®s, we ensure that our consultants abide by IMC USA's code of ethics.



Our consultants have conducted comprehensive and focused management and operations assessments of



organizations nationwide. Schumaker & Company has performed consulting assignments for clients in 33 U.S. states as well as Ontario and Nova Scotia, Canada. Our clients benefit from the competence, knowledge, and attention of a core team that consists of highly skilled professionals who work well together. This structure enables us to offer the recognized expertise, senior-level staffing, and administrative support that are characteristic of larger firms, without the comparable overhead. Additionally, we provide the important benefits of flexibility and attentiveness that only smaller firms can offer.

¹ / "CMC" and CMC logo are certification marks of the Institute of Management Consultants (IMC USA) that are registered in the U.S. and other nations.

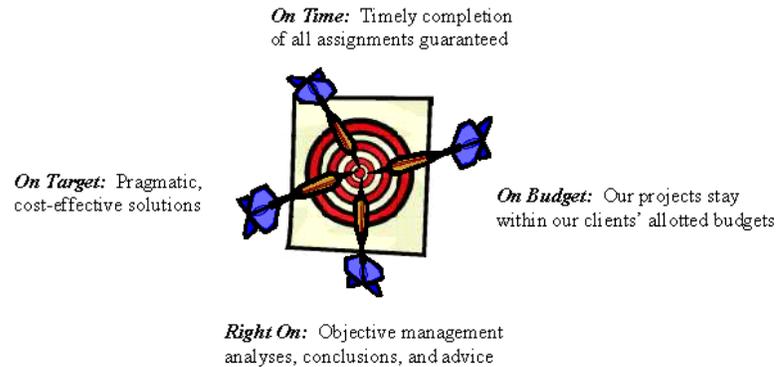
² / The PMI logo is a trademark of the Project Management Institute (PMI) that is registered in the United States and other nations. "PMP" and PMP logo are certification marks of PMI that are registered in the U.S. and other nations.

³ / The CPA logo is a service mark of the American Institute of Certified Public Accountants (AICPA); CPAs are certified by their respective Board of Accountancy organization in the state in which they are registered.

⁴ / The MCP, MCSE, and MCSD certifications are designations of Microsoft Corporation.

Managing Change, Defining Solutions

At Schumaker & Company, we work closely, yet unobtrusively, with management to identify specific opportunities for improvement and to develop solutions. We design practical implementation plans to help manage change and achieve the desired improvements. We are committed to delivering results that are:



Our clients retain Schumaker & Company, often for multiple assignments, thanks to the excellent firm credentials we bring to every project, which are briefly described in the following paragraphs.

- ◆ ***We use technology to enable a fast and flexible response to client needs.*** Recently, for example, one of our clients experienced several delays before the start of a project; despite these delays, the end date was mandated and could not be postponed. Schumaker & Company responded by developing a database application to expedite data gathering and reporting. In doing so, we accomplished the project well within the mandated timeframe. Additionally, we achieved these results using fewer staff than other firms proposed. We pride ourselves on our ability to respond creatively to the challenges and obstacles that often arise during the course of any project.
- ◆ ***We commit to meeting the client's timeframe, not ours.*** Many of our assignments have deadlines that are mandated by legislation or regulatory agencies. As such, they must be met, regardless of the effort involved. Staff departments find themselves bound by obligations created by a regulatory process into which they had no input. You have a job to do and deadlines to meet. Our role is to relieve that time pressure, not to create additional workload for you.
- ◆ ***Our services are cost-effective.*** Our project teams are composed of seasoned executives and senior consultants who bring extensive management and industry experience to bear in developing creative, yet practical, solutions to problems. We use technology to leverage our staff's time, and we keep the firm's administrative burden low. As a result, our clients are not paying for excessive overhead. Our staff consists of seasoned talent, thereby ensuring that our clients are not paying for consultants to learn at their time and expense.
- ◆ ***Collectively combining our perspectives ensures successful results for our clients.*** Many of our projects have dealt specifically with technology itself; other projects have focused on how technology is integrated into the work environment. Our ability to combine both perspectives ensures successful results for our clients. Our role has been to work closely with management to assess program, functional, or technical validity; to identify specific opportunities for improvement, and to develop practical plans for implementation. A survey of our clients reveals that we have successfully fulfilled this role by working closely, yet unobtrusively, with management.
- ◆ ***We are unwaveringly objective.*** In all our dealings with clients, we maintain independence and objectivity. This neutrality allows us to provide the right solution to the identified problems at hand. This ability to "step back" from the situation and view it without organizational or political bias often allows us to develop simple, yet effective, solutions – solutions that may not be readily apparent to those who are deeply entrenched in the daily operations of the organization.



Exhibit B-1 presents a summary of the functional advantages that the Schumaker & Company project team brings to an assignment.

Exhibit B-1
Schumaker & Company Areas of Expertise

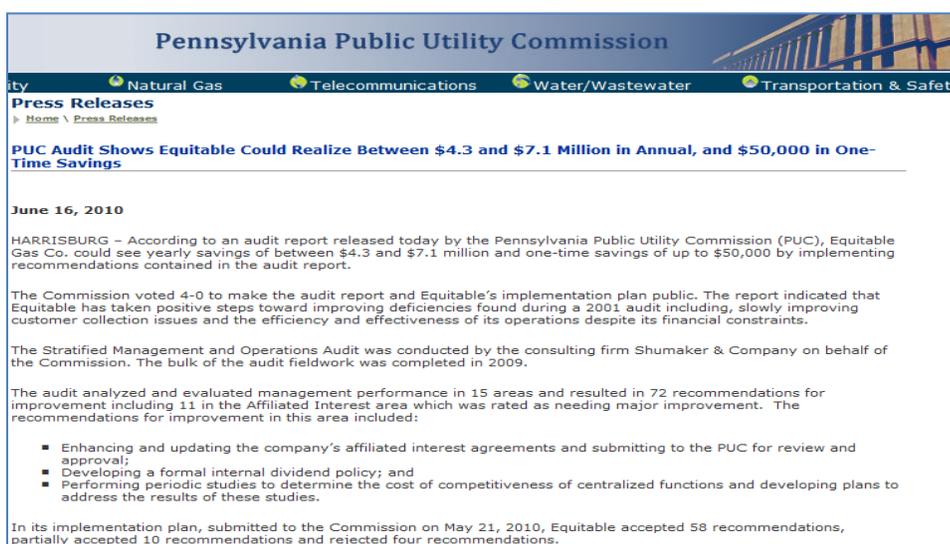
Extensive Utility Industry Experience	Our team has worked with more than 100 utility industry clients. Assignments have involved all sectors of the utility industry, including work for utilities, regulators, public advocates, municipalities, and industry and professional associations. We fully appreciate the legal, regulatory, financial, and cultural factors that complicate planning and operations in the utility industry's competitive environment.
Extensive Regulatory Experience	We have a clear understanding of the purpose and value of the regulatory process, as well as extensive experience in conducting commission assignments. This breadth of knowledge gives us a keen appreciation for the multifaceted needs of regulators.
Proven Methodologies	Through our broad experience with management, operations, and technology processes, we have developed proven methodologies to identify opportunities for improvement and to develop recommendations that are specifically targeted at improving business processes and systems.
Professional Staff	Our consultants consistently meet the highest standards of professional competence and certification, and each is expert in multiple functional areas.
Management Perspective	We bring a sound, comprehensive management perspective to each project and, accordingly, formulate viable recommendations that significantly improve overall effectiveness both short and long term.
Human Resource Expertise	Review of functional staffing levels in relation to assigned responsibilities and industry benchmarks, investigation and assessment of the compensation levels of salary grades and hourly positions, including base rate, perquisites, benefits, and short- and long-term incentives.
Operations Expertise	Our consultants have prior backgrounds as managers and staff in many different kinds of utility operations, thereby allowing us to bring real-life experience to our consulting projects.
Information Technology Expertise	Because of our strong expertise in information technology, we can incorporate the latest technology-based capabilities into our recommendations. We can also ensure that our clients achieve the maximum leverage on their information technology investments.
Cross-Functional Experience	Because our consulting practice is also involved with industries other than the utility sector, we bring advanced methodologies, techniques, and systems from those industries to our utility clients.
Commitment to Outstanding Work	As a consulting firm and as individuals, we have demonstrated a commitment to work known for its high quality and objectivity, all of which is completed on time and on budget.
Implementation Success	We have an enviable record of correctly quantifying expected benefits of recommendations and securing agreement to implement them. Then, we follow up with successful implementation in a timely manner.
Expert Testimony	Several project team members have provided expert testimony before public utility commissions.
Client References	We believe the most reliable measure of a consulting firm's performance is the testimony of former clients. We invite all prospective clients to contact our references for feedback on our strong commitment to independent and accurate analyses and viable recommendation development.

Firm Innovation and Sound Recommendations

We deliver value-based recommendations to clients. As part of our utility consulting studies, we focus on issues of cost-effectiveness and level-of-service provision and how these issues will impact the company, ratepayers, and other stakeholders. We quantify the costs and benefits (both one-time and recurring) of various actions and alternatives under consideration. We also discuss non-quantifiable benefits and costs as part of our recommendations and describe both actual and potential costs and risks to the organization. Our recommendations are always based on sound findings, conclusions, and supporting analyses that clearly demonstrate how benefits outweigh costs and risks. As a result, nearly 100% of our recommendations have been accepted and implemented by our clients.

Provided unsolicited by the Pennsylvania Public Utility Commission, *Exhibit B-2* demonstrates results the Schumaker & Company consulting team, with many of the same proposed individuals, had on four recent similar utility audits.

Exhibit B-2 Recent Pennsylvania Public Utility Commission Press Releases



Equitable Gas Co. | Natural Gas | Telecommunications | Water/Wastewater | Transportation & Safety

Press Releases
Home \ Press Releases

PUC Audit Shows Equitable Could Realize Between \$4.3 and \$7.1 Million in Annual, and \$50,000 in One-Time Savings

June 16, 2010

HARRISBURG – According to an audit report released today by the Pennsylvania Public Utility Commission (PUC), Equitable Gas Co. could see yearly savings of between \$4.3 and \$7.1 million and one-time savings of up to \$50,000 by implementing recommendations contained in the audit report.

The Commission voted 4-0 to make the audit report and Equitable's implementation plan public. The report indicated that Equitable has taken positive steps toward improving deficiencies found during a 2001 audit including, slowly improving customer collection issues and the efficiency and effectiveness of its operations despite its financial constraints.

The Stratified Management and Operations Audit was conducted by the consulting firm Schumaker & Company on behalf of the Commission. The bulk of the audit fieldwork was completed in 2009.

The audit analyzed and evaluated management performance in 15 areas and resulted in 72 recommendations for improvement including 11 in the Affiliated Interest area which was rated as needing major improvement. The recommendations for improvement in this area included:

- Enhancing and updating the company's affiliated interest agreements and submitting to the PUC for review and approval;
- Developing a formal internal dividend policy; and
- Performing periodic studies to determine the cost of competitiveness of centralized functions and developing plans to address the results of these studies.

In its implementation plan, submitted to the Commission on May 21, 2010, Equitable accepted 58 recommendations, partially accepted 10 recommendations and rejected four recommendations.

Please refer to (http://www.puc.state.pa.us/general/press_releases/press_releases.aspx?ShowPR=2543) for more details.



Philadelphia Gas Works (PGW) | Natural Gas | Telecommunications | Water/Wastewater | Transportation & Safety

Press Releases
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PUC Audit Shows PGW Could See Up To \$7.5 Million in Annual, and \$2 million in One-Time Savings

February 05, 2009

HARRISBURG – According to an audit report released today by the Pennsylvania Public Utility Commission (PUC), Philadelphia Gas Works (PGW) could experience yearly savings of up to \$7.5 million and one-time savings of up to \$2 million by implementing recommendations contained in the audit report.

The Commission voted 5-0 to make the audit report and PGW's implementation plan public. The report indicated that PGW has taken positive steps toward improving deficiencies found during a 2001 audit including, slowly improving customer collection issues and the efficiency and effectiveness of its operations despite its financial constraints.

Vice Chairman [Tyronne J. Christy](#) and Commissioner [Wayne E. Gardner](#) issued statements.

The Stratified Management and Operations Audit was conducted by the consulting firm Schumaker and Co. Inc. on behalf of the Commission. The bulk of the audit fieldwork was completed in 2007 with limited amounts of fieldwork conducted during the first half of 2008. The report, therefore, does not reflect the impact of the recent economic downturn on PGW. The audit analyzed and evaluated management performance in 14 functional areas and resulted in 93 recommendations for improvement.

In its implementation plan, submitted to the Commission on Jan. 22, 2009, PGW accepted 88 recommendations, partially accepted three recommendations and rejected two recommendations.

Please refer to (http://www.puc.state.pa.us/general/press_releases/Press_Releases.aspx?ShowPR=2194) for more details.



Exhibit B-2 Recent Pennsylvania Public Utility Commission Press Releases

Pennsylvania Public Utility Commission

ity [Natural Gas](#) [Telecommunications](#) [Water/Wastewater](#) [Transportation & Safety](#)

Press Releases
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PUC Audit Shows Pennsylvania American Water Co. Could See \$1.1 Million in Annual, and \$400,000 in One-Time Savings

November 06, 2008

HARRISBURG – According to an audit report released today by the Pennsylvania Public Utility Commission (PUC), Pennsylvania American Water Company (PAWC) could experience yearly savings of up to \$1.1 million and one-time savings of up to \$400,000 by implementing recommendations contained in the audit report.

The Commission voted 5-0 to make the audit report and PAWC’s implementation plan public. PUC Vice Chairman Tyrone J. Christy issued a [statement](#).

The Stratified Management and Operations Audit was conducted by the consulting firm Shumaker and Co. Inc. on behalf of the Commission. The audit analyzed and evaluated management performance in 20 functional areas and resulted in 114 recommendations for improvement. In its implementation plan, submitted to the Commission on Sept. 8, 2008, PAWC accepted 106 recommendations, partially accepted seven recommendations and rejected one recommendation.

Please refer to (http://www.puc.state.pa.us/general/press_releases/press_releases.aspx?ShowPR=2121) for more details.

Pennsylvania Public Utility Commission

ity [Natural Gas](#) [Telecommunications](#) [Water/Wastewater](#) [Transportation & Safety](#)

Press Releases
[Home \ Press Releases](#)

PUC Audit Shows PECO Could Achieve up to \$6.6 Million Annually

August 30, 2007

HARRISBURG –According to an audit report released today by the Pennsylvania Public Utility Commission (PUC), PECO Energy Co. may realize yearly savings up to \$6.6 million by implementing recommendations contained in the audit.

The Commission voted 5-0 to make the audit report and the company’s implementation plan public. The Stratified Management and Operations Audit analyzed and evaluated management performance in 22 areas. The audit was conducted by the consulting firm Shumaker and Co. Inc. on behalf of the Commission.

The audit makes 53 recommendations to the companies for improvement. The company’s implementation plan accepted 51 of the recommendations and partially accepted one recommendation while rejecting one recommendation.

Please refer to (http://www.puc.state.pa.us/general/press_releases/Press_Releases.aspx?ShowPR=1833) for more details.

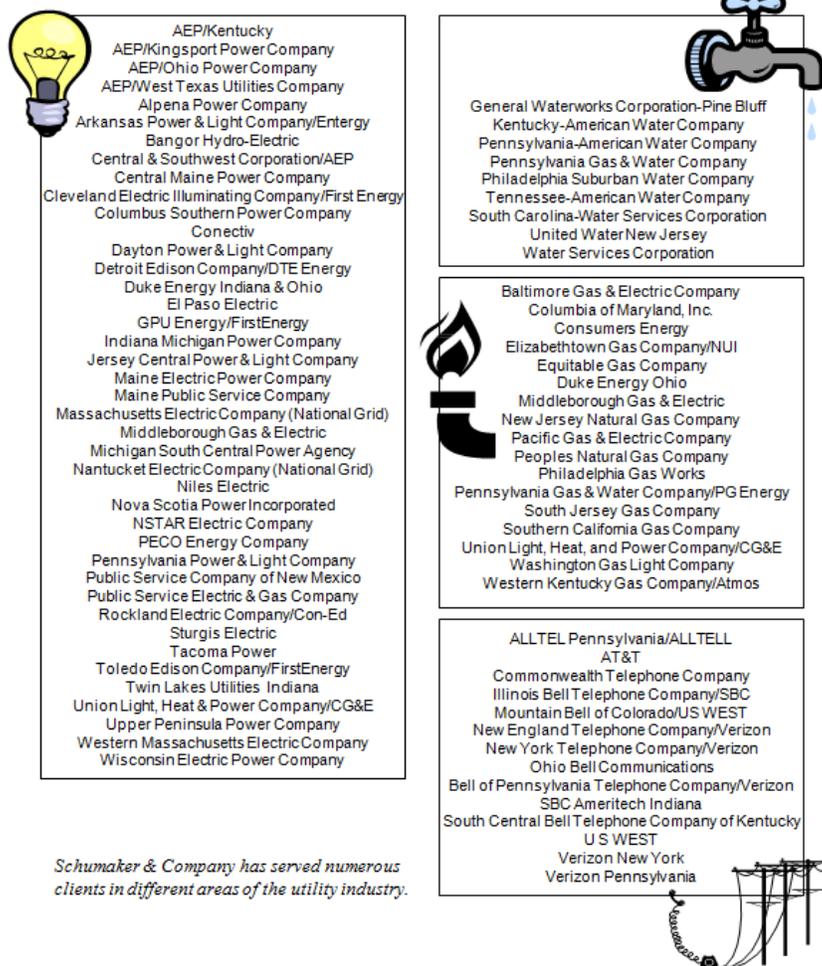
Clients are satisfied with the results we deliver. Schumaker & Company has established a reputation for performing outstanding consulting work, which we attribute to our seasoned consultants and full use of leading-edge computer technology for project management, analysis, and communications. In recent years, Schumaker & Company has completed more than 100 major management, operations, and technology projects in the utility industry. Approximately 80% of our projects are for clients with whom we have previously worked. Their willingness and desire to repeatedly work with our firm indicates their satisfaction with our work.

Prior Utility Experience

We have conducted comprehensive and focused management, operations, and technology studies at the request of public and municipal utilities, telecommunications firms, state and local governmental agencies, manufacturing firms, and service organizations in 33 states.

We understand the needs of our utility sector clients. Our success has been based on the breadth and depth of experience that we bring to our utility assignments. Our extensive experience with utility clients gives us an edge in understanding and meeting their unique needs. We understand the often complex roles and relationships between key stakeholders and the impact these relationships bear during project execution. We understand the importance of multi-stakeholder input and involvement. We know the cost-effectiveness and level-of-service concerns that both utility and regulatory officials face. We also know the potential public visibility that can follow. We believe that quick response and early results are valuable in such situations. We know how to monitor and review practices and processes without disrupting the conduct of normal business or becoming an intrusive force. Our consultants have performed a wide variety of assignments ranging from large, comprehensive studies to small, focused studies, as well as implementation projects. Our project management team is extremely familiar with efficient and effective practices for directing and managing such efforts.

Exhibit B-3 contains a summary of the specific expertise that Schumaker & Company brings to all of its utility assignments.



AEP/Kentucky
 AEP/Kingsport Power Company
 AEP/Ohio Power Company
 AEP/West Texas Utilities Company
 Alpena Power Company
 Arkansas Power & Light Company/Entergy
 Bangor Hydro-Electric
 Central & Southwest Corporation/AEP
 Central Maine Power Company
 Cleveland Electric Illuminating Company/FirstEnergy
 Columbus Southern Power Company
 Conectiv
 Dayton Power & Light Company
 Detroit Edison Company/DTE Energy
 Duke Energy Indiana & Ohio
 El Paso Electric
 GPU Energy/FirstEnergy
 Indiana Michigan Power Company
 Jersey Central Power & Light Company
 Maine Electric Power Company
 Maine Public Service Company
 Massachusetts Electric Company (National Grid)
 Middleborough Gas & Electric
 Michigan South Central Power Agency
 Nantucket Electric Company (National Grid)
 Niles Electric
 Nova Scotia Power Incorporated
 NSTAR Electric Company
 PECO Energy Company
 Pennsylvania Power & Light Company
 Public Service Company of New Mexico
 Public Service Electric & Gas Company
 Rockland Electric Company/Con-Ed
 Sturgis Electric
 Tacoma Power
 Toledo Edison Company/FirstEnergy
 Twin Lakes Utilities Indiana
 Union Light, Heat & Power Company/CG&E
 Upper Peninsula Power Company
 Western Massachusetts Electric Company
 Wisconsin Electric Power Company

General Waterworks Corporation-Pine Bluff
 Kentucky-American Water Company
 Pennsylvania-American Water Company
 Pennsylvania Gas & Water Company
 Philadelphia Suburban Water Company
 Tennessee-American Water Company
 South Carolina-Water Services Corporation
 United Water New Jersey
 Water Services Corporation

Baltimore Gas & Electric Company
 Columbia of Maryland, Inc.
 Consumers Energy
 Elizabethtown Gas Company/NUI
 Equitable Gas Company
 Duke Energy Ohio
 Middleborough Gas & Electric
 New Jersey Natural Gas Company
 Pacific Gas & Electric Company
 Peoples Natural Gas Company
 Philadelphia Gas Works
 Pennsylvania Gas & Water Company/PG Energy
 South Jersey Gas Company
 Southern California Gas Company
 Union Light, Heat, and Power Company/CG&E
 Washington Gas Light Company
 Western Kentucky Gas Company/Atmos

ALLTEL Pennsylvania/ALLTELL
 AT&T
 Commonwealth Telephone Company
 Illinois Bell Telephone Company/SBC
 Mountain Bell of Colorado/US WEST
 New England Telephone Company/Verizon
 New York Telephone Company/Verizon
 Ohio Bell Communications
 Bell of Pennsylvania Telephone Company/Verizon
 SBC Ameritech Indiana
 South Central Bell Telephone Company of Kentucky
 U S WEST
 Verizon New York
 Verizon Pennsylvania

Schumaker & Company has served numerous clients in different areas of the utility industry.

Exhibit B-3 contains a summary of the specific expertise that Schumaker & Company brings to all of its utility assignments.

Exhibit B-3
Schumaker & Company Utility Expertise

Regulatory Issues	Examination and evaluation of regulatory practices for public service commissions, including response to changes from competitive entry, technology introduction, service substitution, conservation, cost of service, and customer demands.
Management and Operations Assessments	Evaluation of the overall effectiveness of management, organizational structure, information and work flow, decision processes, policies and practices, and major operating procedures for all aspects of the utility or company to streamline operations and optimize efficiency, assessment of individual functional units to identify opportunities for improvement through business process re-engineering. Included here are the effects of emergency response, restoration, and communications protocols and practices experienced due to loss of services caused by inclement weather events.
Performance Measurement	Definition and quantification of accurate performance indicators, which involves establishing acceptable benchmarks for evaluation and providing a continuing vehicle to track performance.
Affiliated Transactions	Investigation and assessment of the processes and methodologies by which affiliated relationships and inter-company allocations are calculated, billed, reported, and evaluated.
Engineering & Construction	Examination, evaluation, and implementation of engineering and construction management processes, implementation of our recommendations has proven to result in increased effectiveness, shortened lead times, and improved interfaces.
Mergers and Acquisitions	Investigation of the framework for the establishment of compelling strategic logic and rationale for the deal, a carefully managed regulatory approval process, integration that takes place early and aggressively, and a top-down approach for designing realistic but ambitious economic targets. Regulatory and litigation support review of total shareholder return as affected by two external deal negotiation levers - acquisition premiums and regulatory givebacks - and two internal levers - synergies estimated and synergies delivered. Goal to derive value from merged utilities.
Fuels Management	Analysis and development of procurement practices and fuel requirements planning, ensuring proper contractual, transportation, receiving, storage, and inventory logistics for gas, coal, oil, and uranium.
Information Systems and Technology Optimization	Assessment of technology and systems deployment, maintenance, support, and operations groups to create recommendations that streamline operations and reduce costs, assistance in strategic migration path engineering by developing and implementing long-range strategic technology and systems plans, planning, design, and development, implementation of information systems, and assistance in computer and telecommunications hardware/software selection.
Customer Service	Evaluation of the provision of customer service to the utility's ratepayers, especially in relation to how effectively the needs of the customer for information and problem resolution are handled.
Power Plant Operations	Review and assessment of electric energy production and delivery systems, such as load forecasting, power production and dispatch, purchase and sale, and power plant operations and maintenance.
Power Pool Operations	Assessment of the economic purpose, operating procedures, benefits and problems, and strategic direction associated with major U.S. power pools.
Work Force Management	Design and implementation of comprehensive programs to improve work force productivity, reduce labor costs, and improve departmental cooperation, enhancement of decision-making and shortening of lead times for business processes.
Technical Assessments	Assessment, design, and implementation of management practices, procedures, and systems in facility operations and maintenance, often extending to customer service, meter reading, transmission and distribution, power plants, fuel and natural gas procurement, engineering and construction activities, licensing, quality assurance, physical plant operations, research and development, environmental affairs, and work force management.
Nuclear	Evaluation of nuclear power plant operations, such as operating characteristics, historical and current industry factors, NRC requirements and concerns, and need for economic dispatch of units, determination of the relative level of management prudence and overall effectiveness as it relates directly to nuclear operating facilities and programs.

Typical Projects

Our firm and staff have been involved in numerous management and operations review, planning, process review, and technology implementation projects. Additionally, we have provided project management services. Our role has been to work closely with utilities and regulatory entities to optimize operations through a comprehensive review of processes, people, and technology within various organizations. Examples of the types of services we typically provide include:



- ◆ Management and operations reviews and assessments
- ◆ Affiliate relationships and transactions auditing
- ◆ Reliability auditing
- ◆ Reliability and storm preparedness
- ◆ Competitive assessments and customer surveys
- ◆ Expert testimony and litigation support
- ◆ Strategic and operations planning
- ◆ Business process re-engineering and quality improvement program development
- ◆ Best practices/benchmarking
- ◆ Performance measurement development
- ◆ Merger investigations and analysis
- ◆ Project management and quality assurance services
- ◆ Work management system implementation assistance

When performing these services, our consultants undertake the following activities:

- ◆ **Management and Operations Reviews and Assessments** — We evaluate the overall effectiveness of a utility’s management, organizational structure, information and work flow, decision processes, and major operating policies and procedures as a means by which to streamline operations, increase efficiency, and optimize profit potential. During this type of study, we also perform assessments of individual functional units to identify opportunities for improvement. In addition, these studies often focus on how information technology can be successfully integrated into the work environment.
- ◆ **Affiliate Relationships and Transactions Auditing** — Affiliate auditing is an independent, objective compliance and consulting activity Schumaker & Company’s experts perform to add value and improve an organization’s operations. Helping an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes provides insightful analysis and renders critical assessments, as well as suggestions and guidance for future review, if necessary. Schumaker & Company’s consultants perform professional auditing work in the affiliate area, which involves performance, operational, financial, information technology, and compliance audit assignments.
- ◆ **Reliability Auditing** — The efficiency and effectiveness of the management of the transmission and distribution assets of an electric utility and the gas distribution system of a gas utility directly translates into the system reliability experienced by the customer. The decision making regarding the management of these assets should be based on more than personnel “experience” or prior practices and, as such, should incorporate the use of extensive quantitative data available from within the organizational information technology resources. The utility should have extensive data collection and analysis capabilities to monitor the overall reliability of its infrastructure components. The utility should balance investments in modern distribution automation technology with maintenance, repair, and replacement of equipment and components to ensure that continued good service reliability is experienced by customers. The overall organization of the various functions related to electric and gas distribution should be efficient and effective with clearly defined roles and responsibilities, staffing levels that are workload driven, and adequate consolidation of activities. The work management tools used for managing work activities should include planning, scheduling, outage records, and resource loading techniques and have a level of



detail sufficient for adequate control. Facilities and equipment for distribution personnel should be adequate and well maintained. There should be a well-developed maintenance management system to identify maintenance items, schedule maintenance work, record costs and durations of equipment failures, and record maintenance histories. Well planned and fully functional vegetation management programs should be in place to minimize system service disruptions to the greatest extent possible. Proper work management and manpower planning programs should be utilized that facilitate the capability to utilize the existing workforce to the maximum extent possible at the greatest level of efficiency.

- ◆ **Reliability and Storm Preparedness** — Schumaker & Company consultants work with utilities throughout North America to assess their preparedness to withstand and respond to severe weather events and other emergencies, and to identify opportunities to harden their distribution infrastructures to withstand outages caused by high winds, vegetation, earthquakes, lightning, snow, and ice storms. After establishing the optimal use of the client's current facilities and operational practices; including a detailed evaluation of the process of requesting, deploying, and integrating mutual assistance workers, the mobilization of company workforce; assessment of damage and outages by Outage Management Systems and the workforce; and, how work orders were identified, assigned, completed, and closed, our consultants evaluate additional reliability improvement measures in the areas of construction standards, maintenance and operational practices, vegetation management, and distribution automation. We then review, analyze, and critique the effectiveness of restoration activities undertaken before, during, and after a weather event and then identify solutions to any gaps found during the assessment.
- ◆ **Competitive Assessments and Customer Surveys** — We develop and analyze results from customer surveys to assist management in evaluating the customer's perception of the effectiveness and efficiency of a utility. We also perform competitive assessments to assist the utility in benchmarking its operations against those of similar organizations. Studies such as these allow the organization to view its operations through the eyes of the recipients of its services, as well as its peers.
- ◆ **Expert Testimony and Litigation Support** — For the past several years, our consultants have given expert testimony for utilities and regulatory commissions in courts and hearings and have provided litigation support on a wide variety of topics. These topics have included antitrust and liability cases, environmental damages and other natural-resource litigation, and trade and public-utility regulations. Some of the most important qualities of a good expert witness are sharp, clear analysis, the ability to engage a jury, the capacity to work quickly, and the skill to react to surprises. We are thorough, independent, and we do the hard work. A rigorous analysis based on well-established principles is only part of our job. We must also communicate our work to non-specialists. We focus on how the client, the jury, and the judge will understand the problem and the analysis. Our work is not complete until it is accessible to the people who need to understand it.
- ◆ **Strategic and Operations Planning** — We assist clients through strategic and operations planning processes that are designed to provide results. Generally, one of the most important process elements involves gathering key participants who work together to develop and agree on all that a strategic plan entails. It is typically best that key participants meet offsite where they can focus their complete and undivided attention on the identification of underlying assumptions, mission, and strengths, weaknesses, opportunities, and threats (SWOT) analysis. These sessions lead to the development of specific goals and objectives, commitments to action, timetables, and the foundation for comprehensive roll-out plans.
- ◆ **Business Process Re-engineering and Quality Improvement Programs Development** — We work together with a utility to evaluate its overall effectiveness or the effectiveness of a particular unit within its organization. Some of the strategies we undertake include a review of policies, procedures, activities, staffing levels, performance measurements, annual expenditures and capital expenditures. We provide assistance in defining and critiquing specific business processes, flow of work activities, strategies, outputs and levels of customer service. We also assist our clients in developing recommendations for improvements through the use of process analysis teams to identify redundant or unneeded activities, bottlenecks in processes, etc.



- ◆ **Best Practices/Benchmarking** — We work on the principle that organizations can chart a course to superior economic performance by studying the best business practices, operating tactics, and winning strategies of industry competitive organizations. Clients must understand their strategic intent, and identify core competencies, key business processes, and critical success factors. The choice of organization(s) to compare with is key and dependent on several factors. Requirements must be established for selecting benchmarking partners, given the benchmarking objective, or for characterizing the degree of relevance that any particular company may have as a potential benchmarking partner. Our benchmarking process includes executive interviews and custom studies to identify gaps, develop solutions, grow revenues and profits, and provide recommendations.
- ◆ **Performance Measurement Development** — We define and quantify fundamental indicators by which management can accurately measure performance. This process involves establishing acceptable benchmarks to evaluate management and providing a vehicle for continued performance tracking.
- ◆ **Merger Investigation and Analysis** — The merger regulations in the energy industry should focus on the efficiencies created as a result of the merger. Larger firms have been found to operate more efficiently, and increase in market concentration should not be immediately condemned. The most effective tool in the merger approval process is an analysis of the efficiencies created by the merger. Schumaker & Company consultants investigate operating efficiencies such as those derived from economies of scale, resource allocation, and technological innovation. Our project team has extensive experience in electric utility mergers. We assisted the Public Advocate Office in Maine on a merger intervention regarding the acquisition of Maine Public Service Company by Emera Energy (a Canadian company). In addition, our proposed project team is also performing a management review of Jersey Central Power and Light Company –one of the operating companies of FirstEnergy that was acquired in the General Public Utilities (GPU) merger. We have recent, relevant experience that exceeds our competition.
- ◆ **Project Management and Quality Assurance Services** — We provide dedicated, professional project managers who can direct the undertaking and implementation of large, comprehensive projects that involve people, process, and technology. We subscribe to the Project Management Institute’s *Project Management Body of Knowledge*. Our staff is skilled in the latest project management tools, techniques, and methodologies for addressing key knowledge areas, such as integration management, scope management, time management, cost management, quality management, human resource management, communications management, risk management, and procurement management. We leverage this toolkit as a means of keeping projects on time and within budget while at the same time upholding the quality level desired by management.
- ◆ **Work Management Systems Implementation Assistance** — We select and implement computerized project management or work management systems. Results include increased productivity, improved coordination between departments and overall decision making, shortened lead times, and increased profitability. We incorporate the identification of performance indicators, conduct orientation sessions, develop systems and procedures, and train personnel.



Testimony by Schumaker & Company Staff



Schumaker & Company staff members have provided expert testimony to a number of state commissions, including:

Commission	Year	Subject
Tennessee	2011	Affiliate audit of Tennessee-American Water Company, including an investigation and assessment of the American Water Works Service Company management performance and decisions relating to internal processes and internal controls involving affiliate relationships and transactions
Maine	2011 2011 2010 1993 1990	Regulatory and litigation support in exemptions/reorganization approvals for Maine Public Advocate Regulatory and litigation support in credit and collection policies for Maine Public Advocate Regulatory and litigation support in petition intervention for Maine Public Advocate Focused management audit of Central Maine Power Company Customer Service System project implementation of Central Maine Power Company
Illinois	1993	Focused management audit of the affiliated transactions of Illinois Bell Telephone Company
Philadelphia	1992	Management audit follow-up of the Philadelphia Gas Works
Arkansas	1992	Management audit of General Waterworks of Pine Bluff
Ohio	1992 1991 1990 1989 1986 1984	Fuel-related practices of Cleveland Electric Illuminating Fuel-related practices of Cleveland Electric Illuminating and also Toledo Edison Company Fuel procurement practices of Columbus Southern Power Company and of Ohio Power Company Fuel procurement practices of Ohio Power Company Fuel procurement practices of Cleveland Electric Illuminating Fuel procurement practices of Toledo Edison and of Cleveland Electric Illuminating
New York	1983	Allowable costs of Shoreham Nuclear Plant
Wisconsin	1982	Cost overrun of Pleasant Prairie Project
Pennsylvania	1981	Formation of GPU Nuclear Corporation

Sample Audit Reports

Due to its size, our *Audit Report Samples* have been provided electronically via web link, as follows:

- ◆ PECO Energy
 - Volume I: <http://www.puc.state.pa.us/PCDOCS/681316.pdf>
 - Volume II: <http://www.puc.state.pa.us/PCDOCS/681317.pdf>
- ◆ Pennsylvania-American Water Company
 - Volume I: <http://www.puc.state.pa.us/PCDOCS/1026732.pdf>
 - Volume II: <http://www.puc.state.pa.us/PCDOCS/1026733.pdf>
 - Volume III: <http://www.puc.state.pa.us/PCDOCS/1026755.pdf>
 - Company Implementation Plan Response: <http://www.puc.state.pa.us/PCDOCS/1026386.doc>
- ◆ Philadelphia Gas Works (PGW):
 - Final Report: <http://www.puc.state.pa.us/PCDOCS/1032666.pdf>
 - Company Implementation Plan Response: <http://www.puc.state.pa.us/PCDOCS/1032665.pdf>
- ◆ Equitable Gas Company (EGC)
 - Final Report: <http://www.puc.state.pa.us/pdocs/1095768.pdf>

Client List

The following table provides a partial list of the most relevant clients with which our consultants have worked during the last several years. It highlights our key collaborations with state and local governments, telecommunications firms, utilities, service companies, and manufacturing firms.

ELECTRIC, GAS, & WATER/WASTEWATER UTILITIES

AEP/Kentucky	Michigan Wisconsin Pipeline
AEP/Kingsport Power Company	Missouri Public Service Company
AEP/Ohio Power Company	Nantucket Electric Company (National Grid)
AEP/West Texas Utilities Company	Nebraska Public Power District
Alpena Power Company	New Jersey Natural Gas Company
American Natural Resources	New Orleans Public Service Inc.
Arkansas Power and Light Company/Entergy Corporation	Niagara Mohawk Corporation
Baltimore Gas & Electric Company	Nova Scotia Power Incorporated
Bangor Hydro-Electric	NSTAR Electric Company
Central Maine Power Company	Pacific Gas and Electric Company
Cincinnati Gas and Electric Company (CG&E)	PECO Energy Company
Cleveland Electric Illuminating Company	Pennsylvania American Water Company
Columbia of Maryland, Inc.	Pennsylvania Gas & Water Company
Columbus Southern Power Company	Pennsylvania Power & Light Company
Conectiv	People's Natural Gas Company
Consumers Power Company (Consumers Energy)	Philadelphia Gas Works
Cooperative Power Association	Philadelphia Suburban Water Company
Dayton Power and Light Company	Public Service Company of New Mexico
Detroit Edison Company	Public Service Electric and Gas Company
Duke Energy Indiana	Rockland Electric Company
Duke Energy Ohio	Sierra Pacific Power Company
El Paso Electric Company	Springfield City Utilities
Electricity Supply Board of Ireland	Southern California Edison Company
Elizabethtown Gas Company/NUI Corporation	Southern California Gas Company
Empire Electric District Company	South Jersey Gas Company
Enbridge	Sunflower Electric Cooperative
Equitable Gas Company	Tacoma Power
Florida Power and Light Company	Tennessee-American Water Company
Georgia Power Company	Tennessee Valley Authority
General Waterworks Corporation (Pine Bluff)	Toledo Edison Company
GPU Energy	Twin Lakes Utilities Indiana
Illinois Electric Co., Illinois Power Co.	Union Electric Power Company
Indiana Michigan Power Company	Union Light, Heat and Power Company/CG&E
Iowa-Illinois Gas & Electric Company	United Water New Jersey
Jacksonville Electric Authority	Upper Peninsula Power Company
Jersey Central Power & Light Company	Utilicorp United, Inc.
Kentucky-American Water Company	Washington Gas Light Company
Maine Electric Power Company	Water Services Corporation
Massachusetts Electric Company (National Grid)	Western Kentucky Gas Company
Metropolitan Edison Company	Western Massachusetts Electric Company
Michigan South Central Power Agency	Wisconsin Electric Power Company

TELECOMMUNICATIONS COMPANIES

ALLTEL, Inc.	New York Telephone Company
American Telephone & Telegraph Company (AT&T)	Ohio Bell Communications
Bell of Pennsylvania Telephone Company	SBC Ameritech Indiana
Commonwealth Telephone Company	South Central Bell Telephone Company of Kentucky
Contel (Illinois and Texas)	United Telephone of Texas
Illinois Bell Telephone Company	U S WEST
Mountain Bell of Colorado	Verizon New York
New England Telephone Company	Verizon Pennsylvania



Prior Experience

Descriptions of selected projects follow. We urge you to call the references in this selected projects list to obtain corroborating feedback regarding our strong commitment to independent objectivity and superior results.

ELECTRIC UTILITY ASSIGNMENTS

City of Tacoma, Department of Public Utilities, Light Division

June 2011 – November 2011

Tacoma, Washington



Mr. Larry Nyquist, Senior Power Analyst
 Mr. David Ward, Transmission & Distribution Manager
 Tacoma Power, 3628 South 35th Street, Tacoma, WA 98409

(253) 502-8227
lnyquist@cityoftacoma.org
 (253) 502-8286
dward@cityoftacoma.org

Team: Dennis Schumaker, David Vondle, Eugene Johnson, and Charles Morgan

Assisted the City of Tacoma, Department of Public Utilities, Light Division (dba Tacoma Power) with a comprehensive review and assessment of its Transmission and Distribution (T&D) management and operation practices. Schumaker & Company applied an enterprise performance management approach that emphasized the relationship between service levels and costs. The mission of the enterprise was to provide good service at the lowest long-term total cost. Further, every enterprise management team has the responsibility to develop, implement and execute a performance management program that delivers measurable good service at the lowest long-term total cost. The Schumaker & Company approach evaluated the service and cost performances of Tacoma Power's T&D Section and recommended improvements in service levels as appropriate and cost reductions as practical.

This assignment involved four consultants over roughly 688 hours for a total project cost of \$177,278.

State of Maine Public Advocate

June 2011 – October 2011

Augusta, Maine



Mr. Richard Davies
 Public Advocate Office, 112 State House Station
 Augusta, ME 04333-0112

(207) 287-2445
Richard.Davies@maine.gov

Team: David Vondle

Provided regulatory and litigation support to the Maine Public Advocate regarding Bangor Hydro-Electric Company's and Maine Public Service Company's request for exemptions and for reorganization approvals (Docket No. 2010-170).

This assignment involved two consultants over roughly 106 hours for a total project cost of \$25,000.

State of Maine Public Advocate

June 2011 – October 2011

Augusta, Maine



Mr. Richard Davies
 Public Advocate Office, 112 State House Station
 Augusta, ME 04333-0112

(207) 287-2445
Richard.Davies@maine.gov

Team: David Vondle and Robert Rosenkoetter

Provided regulatory and litigation support to the Maine Public Advocate regarding Central Maine Power Company's (CMP's) credit and collection policies and standard offer uncollectible balances (Docket No. 2010-327). The Maine Public Utilities Commission (MPUC) staff has made a preliminary determination that CMP's actions led to a significant increase in its uncollectible balances and that some of its actions were imprudent. Specifically, the Public Advocate required expert consulting services to assist his staff in 1) evaluating the questions presented by the MPUC's notice of investigation and the staff bench analysis in this proceeding; 2) evaluating CMP's response to a bench analysis filed on June 24, 2011; and 3) presenting evidence and recommendations before the MPUC and/or advice to the Public Advocate regarding these questions.

This assignment involved two consultants over roughly 108 hours for a total project cost of \$25,000.

ELECTRIC UTILITY ASSIGNMENTS

Nova Scotia Power Incorporated*May 2011 – February 2012*

Halifax, Nova Scotia



Ms. Roberta Hupman, Senior Internal Auditor
 Nova Scotia Power Incorporated
 1894 Barrington Street, 14th Floor, Halifax, Nova Scotia B3J 2A8

(902) 428-6637
Roberta.Hupman@emera.com

Team: Dennis Schumaker, Eugene Johnson, Patricia Schumaker, and Jaye Kain

Assisted Nova Scotia Power Incorporated (NSPI) in undertaking an audit to examine the solid fuel inventory management function and provide meaningful recommendations for improvement. The review addressed adherence to good utility practice and consistency with the policies and procedures governing fuel management as described in the NSPI Fuel Manual. The scope of the audit included testing the assertions of existence and valuation and an examination of access control for NSPI's coal inventory. The process audited spanned the receipt of the physical inventory through to financial reporting, with a particular focus on adjustments and/or discrepancies between the physical inventory and the inventory records.

This assignment involved four consultants over roughly 336 hours for a total project cost of approximately \$79,960 (\$77,787 Cdn).

Michigan Public Service Commission, Regulated Energy Division*July 2010 – July 2013*

Lansing, Michigan



Mr. Steve McLean, Mr. Daniel Blair, and Mr. Mark Pung
 Regulated Energy Division, Michigan Public Service Commission
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pungm@michigan.gov

**DTE Energy****Team: Dennis Schumaker, Patricia Schumaker, Martha King, and Jaye Kain**

Assisted the Regulated Energy Division of the Michigan Public Service Commission by verifying that the requirements of Section 11, Public Act No. 286 of 2008 are being satisfied beginning with rate case orders issued after January 1, 2009 for each electric utility in the state, including Detroit Edison, Consumers Energy, Upper Peninsula Power Company, Wisconsin Electric Power Company, Alpena Power Company, and Indiana Michigan Power.

Regulated energy utilities file rate cases with the Commission for approval. The Commission issues an order after reviewing the testimony and exhibits of the utility, interveners and the Commission staff. Subsection (1) of Section 11 of PA 286 requires the Commission to phase in electric rates equal to the cost of providing service to each customer class over a period of five years from the effective date of this act unless an exception is met. Therefore, for each regulated electric utility with more than one million retail customers (Consumers Energy and Detroit Edison), the MPSC is phasing in electric rates equal to the cost of providing service to each customer class before October 2013. For each regulated electric utility with less than one million retail customers (all others in Michigan), as mentioned in Subsection (2) as an exception, the phase-in period for cost-of-service rates can exceed five years.



ELECTRIC UTILITY ASSIGNMENTS

El Paso Electric Company

El Paso, Texas



Mr. Marc Martinez, Utility Economist
New Mexico Public Regulation Commission
1120 Paseo De Peralto (P.E.R.A. Building), Santa Fe, NM 87504

October 2010 – October 2011

(502) 241-2479
Marc.Martinez1@state.nm.us



Ms. Nadia Powell and Mr. Evan Evans
El Paso Electric Company
100 North Stanton, El Paso, TX 79960

(915) 543-2284
npowell1@epelectric.com
(915) 543-5995
eevans1@epelectric.com

Team: Dennis Schumaker, Patricia Schumaker, Eugene Johnson, Robert Rosenkoetter, David Vondle, Julia Bodamer, and Jaye Kain

Assisted the New Mexico Public Regulation Commission (NMPRC) staff in a prudence review and audit of the fuel and purchased power cost adjustment clause (fuel clause) and related documentation of the electric business operations of El Paso Electric Company (EPE), specifically to provide professional auditing and prudence review services of EPE's fuel and purchased power costs, fuel clause filings and related documentation for the period of January 1, 2010 through December 31, 2010. This review investigated whether EPE's calculation of the fuel clause was accurate and the costs included in the fuel clause included only allowed costs and EPE's current accounting and internal control policies, management practices, and operational procedures, as they pertain to EPE's administration of the fuel clause, were effective and met related requirements.

This assignment involved seven consultants over roughly 1,448 hours for a total project cost of approximately \$309,126.

Jersey Central Power & Light

Newark, New Jersey



Mr. Dennis J. Moran, Director, Division of Audits
Mr. Art Gallin
Mr. Gary Schmidt
State Of New Jersey, Board of Public Utilities
44 South Clinton, 7th Floor, Trenton, NJ 08609

(609) 292-0626
Dennis.Moran@bpu.state.nj.us
(609) 292-1664
Arthur.Gallin@bpu.state.nj.us
Gary.Schmidt@bpu.state.nj.us



Mr. Larry Sweeney, Rates & Regulatory Affairs –NJ
Mr. Santino (Sonny) Fanelli
Mr. Jim O'Toole
Jersey Central Power & Light Co
300 Madison Avenue, Morristown, NJ 07962-1911

(973) 401-8679
lsweeney@firstenergycorp.com
(973) 401-8355
sfanelli@firstenergycorp.com
(973) 401-8296
jotoole@firstenergycorp.com

June 2010 – June 2011**Team: Patricia Schumaker, Dennis Schumaker, Lee Burgess, Eugene Johnson, D. Kerry Laycock, Robert Rosenkoetter, David Vondle, Gail Stopar, and Jaye Kain**

Assisted the New Jersey Board of Public Utilities in an audit of the affiliated transactions between Jersey Central Power and Light (JCP&L) and its affiliates, and a comprehensive management audit of JCP&L. Task areas included an examination of affiliate relationships and cost allocation methodologies, executive management and corporate governance, organization structure, human resources, strategic planning, finance, accounting and property records, cash management, procurement and purchasing of energy, distribution and operation management, extensions and upgrades to provide regulated services, clean energy, market conditions, contractor performance, customer service, external relations, support services, and a review of actions taken by JCP&L regarding prior audits. As part of the audit, Schumaker & Company reviewed and assessed affiliate cost allocation methodologies to determine accounting and allocation procedures for separating the costs of inter-company transactions. Analysis determined if current accounting and allocation procedures were equitable, fair, and did not favor certain affiliates over JCP&L and its ratepayers. Additionally, examination assessed the electric generation policies, distribution policies, and assignment strategies of JCP&L and its affiliates.

This assignment involved nine consultants over roughly 2,944 hours for a total project cost of approximately \$594,720.

ELECTRIC UTILITY ASSIGNMENTS

Dayton Power & Light Company*June 2010 – August 2010*

Dayton, Ohio



Ms. Judy Baker, DPL Director, Internal Audit
 1065 Woodman Drive
 Dayton, OH 45432

(937) 259-7905
judy.baker@dplinc.com

Team: Patricia Schumaker, Dennis Schumaker, Robert Rosenkoetter, Eugene Johnson, and Jaye Kain

Provided fuel cost recovery rider audit co-sourcing assistance to Dayton Power and Light Company (DP&L) to prepare DP&L for its annual review and audit to take place in the first quarter of 2011 for calendar year 2010. Items covered in the scope of work included fuel prices, allocation between wholesale and retail, sharing of gains and losses, coal handling costs, environmental compliance, PJM-related charges, power plant performance, and utility industry perspective.

This assignment involved five consultants over roughly 536 hours for a total project cost of approximately \$113,680.

State of Maine Public Advocate*January 2010 – June 2010*

Augusta, Maine



Mr. Richard Davies
 Public Advocate Office, 112 State House Station
 Augusta, ME 04333-0112

(207) 287-2445
Richard.Davies@maine.gov

Team: Dennis Schumaker and David Vondle

Provided regulatory and litigation support to the Maine Public Advocate in its intervention in a petition filed on March 18, 2010 at the Maine Public Utilities Commission by Bangor Hydro-Electric Power Company, Maine Public Service Company, Maine Electric Power Company, Inc., and Chester SVC Partnership requesting an approval of reorganization (35-A M.R.S.A. §§ 708 and 1103) financial provisions. Specifically, Schumaker & Company consultants were responsible for analyzing all pertinent data and presenting overall recommendations on the regulatory (including reliability) implications of the proposed merger.

This assignment involved two consultants over roughly 104 hours for a total project cost of approximately \$25,560.

Duke Energy Ohio, Inc.*January 2010 – May 2010
Follow-up in Subsequent Years*

Cincinnati, Ohio



Ms. Tamara Turkenton
 Public Utilities Commission of Ohio
 180 East Broad Street, Columbus, Ohio 43215-3793

(614) 466-1825
tammy.turkenton@puc.state.oh.us



Ms. Anita Schafer & Ms. Dianne Kuhnell
 Duke Energy Ohio
 139 East Fourth Street, Cincinnati, Ohio 45202

(513) 419-1847
anita.schafer@duke-energy.com
 (513) 287-4337
dianne.kuhnell@duke-energy.com

Team: Dennis Schumaker, Patricia Schumaker, Julia Bodamer, Robert Rosenkoetter, Eugene Johnson, Gail Stopar, and Jaye Kain

Assisted the Public Utilities Commission of Ohio (PUCO) staff in a management/performance and financial audit of Duke's fuel and purchased power and system reliability tracker riders of Duke Energy Ohio, Inc. Specifically, conducted an audit of the company's fuel costs (including any renewable energy costs) plus an audit of system reliability costs. This audit addressed the management/performance and financial aspects of the recovery mechanism. It consisted of a three-year audit cycle (2009-2011) with a complete and thorough audit being conducted in each year of the audit cycle. The initial audit included the actual cost for Rider PTC-FPP for the months January 2009 through December 2009.

This assignment involved seven consultants over roughly 760 hours during the first year, with reduced effort for the following two years, for a total project cost of approximately \$327,000.



ELECTRIC UTILITY ASSIGNMENTS

Public Service Company of New Mexico*July 2009 – February 2010*

Albuquerque, New Mexico



Mr. Marc Martinez, Utility Economist
 New Mexico Public Regulation Commission
 1120 Paseo de Peralta, PERA Building 515A
 Santa Fe, NM 87504-1269

(505) 827-5858
Marc.Martinez1@state.nm.us



Mr. Tom Wander, Manager, Regulatory Projects
 Public Service Company of New Mexico
 Alvarado Square, Albuquerque, NM 87158-0810

(502) 241-2479
Thomas.Wander@pnmresources.com

Team: Dennis Schumaker, Patricia Schumaker, Robert Rosenkoetter, Eugene Johnson, Julia Bodamer, and Jaye Kain

Assisted the New Mexico Public Regulation Commission (NMPRC) staff in a prudence review and audit of the fuel and purchased power cost adjustment clause (fuel clause) and related documentation of the electric business operations of Public Service Company of New Mexico (PNM). In specific, to provide professional auditing and prudence review services of PNM's fuel and purchased power costs, fuel clause filings and related documentation for the period of June 1, 2008 through June 30, 2009. This review provided documented evidence on the following:

- ◆ PNM's calculation of the fuel clause is accurate and the costs included in the fuel clause include only allowed costs
- ◆ PNM's current accounting and internal control policies, management practices, and operational procedures as they pertain to PNM's administration of the fuel clause are effective and meet related requirements

This assignment involved six consultants over roughly 1368 hours during a seven-month effort, for a total project cost of approximately \$341,869.

PECO Energy Company*June 2006 – August 2007*

Philadelphia, Pennsylvania



Mr. John Clista, Management Audit Supervisor
 Bureau of Audits, Pennsylvania Public Utility Commission
 3rd Floor East, Commonwealth Keystone Building
 400 North Street, Harrisburg, PA 17120

(717) 772-0317
jclista@state.pa.us



Mr. Richard A. Schlesinger
 Sr. Rate Specialist & Regulatory Process Lead
 PECO Energy Company, Regulatory & Governmental Affairs
 2301 Market Street S15-2, Philadelphia, PA 19103

(215) 841-5771
rich.schlesinger@peco-energy.com

Team: Patricia Schumaker, Dennis Schumaker, Julia Bodamer, Lee Burgess, D. Kerry Laycock, Martin Murphy, Robert Rosenkoetter, Siegfried Guggenmoos, Gail Stopar, and Jaye Kain

Assisted the Pennsylvania Public Utility Commission (PaPUC) staff in a stratified management and operations audit of PECO Energy Company. This audit consisted of three phases. The first involved a diagnostic review that assessed the condition of each functional area or business unit against evaluative criteria or expected business practice. While this review was primarily limited to determining if appropriate management controls, systems and processes are in place, it was of sufficient scope to identify significant problems requiring additional focused analysis. The second phase entailed an in-depth analysis of pre-identified areas or issues. These analyses were of sufficient depth to present specific recommendations for changes in combination with projected costs and potential dollar savings or other quantifiable benefits. The third phase constituted an in-depth, focused analysis of two issues (emergency response and GIS) resulting from the diagnostic review phase.

This assignment involved ten consultants over roughly 4,064 hours during a 13-month effort for a total project cost of approximately \$843,112.

ELECTRIC UTILITY ASSIGNMENTS

AEP/Kentucky

Hazard, Kentucky

August 2002 – April 2003

Mr. John Rogness
 Kentucky Public Service Commission
 211 Sower Blvd., P.O. Box 615, Frankfort, KY 40601

(502) 564-3940 ext 229
jarogness@mail.state.ky.us



Mr. Errol Wagner, Administrator
 AEP/Kentucky
 101 A Enterprise Drive, Frankfort, KY 40602-5190

(502) 696-7010
ekwagner@aep.com

Team: Dennis Schumaker, Martin Murphy, and Siegfried Guggenmoos

Performed an assessment of the reliability of service within AEP/Kentucky's distribution system in its Hazard service territory (a forested mountainous terrain). This region has historically experienced a greater number of electric service interruptions than other AEP/Kentucky service areas, and additionally, these interruptions have tended to be of longer in duration.

This assignment involved three consultants over roughly 700 hours during a six-month effort, for a total project cost of approximately \$145,000.

New Jersey Board of Public Utilities***Conectiv, GPU Energy, Public Service Electric & Gas, & Rockland Electric***

Newark, New Jersey

November 2000 – April 2001

Mr. Chris Molner, Principal Utility Management Analyst
 New Jersey Board of Public Utilities
 44 South Clinton, 7th Floor
 Trenton, NJ 08609

(973) 648-7690
molner@bpu.state.nj.us

**Team: Dennis Schumaker, Martin Murphy, Eric Kobosh, Andrew Benedict, William Braatz, and Kenneth Hobson**

Assisted New Jersey Board of Public Utilities (BPU) staff in reviewing and monitoring implementation of recommendations that resulted from an investigation of the system reliability of New Jersey's electric utilities. Assisted by reviewing and investigating information supplied by the four utilities in connection with the implementation of selected recommendations as ordered by the Board. Worked closely with BPU staff to assist in fulfilling the Board's obligation to assure that, notwithstanding the changes occurring in the electric industry, customers are provided reliable, safe, and adequate service now and in the future. Particular emphasis was placed on activities to improve and/or maintain CAIDI and SAIDI indicators to/at acceptable levels. Issues regarding work force management and construction program planning were addressed. Additionally, performed assessments of each utility's system, specifically the distribution system planning and engineering practices, load flow analysis, transmission and substation maintenance practices and procedures, and adequacy of lightning protections.

This assignment involved six consultants over roughly 900 hours of effort during a five-month effort, for a total project cost of approximately \$221,000.



ELECTRIC UTILITY ASSIGNMENTS

Illinois Commerce Commission*May 1999 – March 2000*

Springfield, Illinois



Mr. Ken Kirchner, Consumer Counselor
527 East Capitol Avenue
Springfield, IL 62701

(217) 785-8438
kkirchne@icc.state.il.us

Team: Dennis Schumaker, Karen Sikkenga, Maria Suchowski, John Sargent, and Cara Corwin

Designed a survey to measure customer satisfaction with electric service reliability and quality, clarity of billing, rates, and services. Provided Electric Service Customer Satisfaction Survey Rules to instruct electric service providers on how to administer the survey and how to understand, interpret, and present its results. Conducted workshops to train electric service providers on how to implement the customer satisfaction survey.

This assignment involved five consultants over approximately 750 hours of effort during a 10-month period, for a total project cost of approximately \$130,000.

City of Sturgis*April 1997 – January 1998*

Sturgis, Michigan



Mr. John Griffith
Department Superintendent
130 N. Nottawa, P.O. Box 280, Sturgis, MI 49091

(269) 659-7204

Team: Dennis Schumaker, Patricia Schumaker, Pam Roberts-Brown, Laurel Keller, John Ferrell, Deb Babcock, and Cara Corwin

Performed a management and operations review of various city departments, conducted a customer satisfaction and needs assessment, and developed a strategic plan. Addressed the changes occurring within the electric utility industry and the competitive threats felt by the electric operations department. The effort involved: (1) performing a competitive assessment and benchmarking; (2) surveying customer attitudes to identify issues that required addressing in the strategic plan; (3) conducting a management and operations review of the relevant city departments; and (4) assisting the electric utility in conducting a strategic planning session.

This assignment involved seven consultants over approximately 620 hours of effort during a seven-month period, for a total project cost of approximately \$60,000. The strategic planning effort was undertaken in January 1998.

Town of Middleborough, Gas & Electric Department*December 1996 – February 1998*

Middleborough, Massachusetts



Mr. James Collins & Mr. James Smith (Retired), General Manager
Middleborough Gas & Electric Dept.
32 South Main Street, Middleborough, MA 02346

(508) 946-3777

Team: Dennis Schumaker and Patricia Schumaker

Performed a competitive assessment of the operations of this municipal gas and electric department. This assignment included a management review of all functional areas, benchmarking of major performance indicators in relation to other Massachusetts municipalities and the best practices of other public and investor-owned utilities.

Two consultants spent about 300 hours over a four-month period. Subsequently Schumaker & Company has been providing strategic planning and information technology assessment and planning services to this organization. The costs of these projects totaled approximately \$150,000.

ELECTRIC UTILITY ASSIGNMENTS

City of Coldwater, Board of Public Utilities***November 1996***

Coldwater, Michigan



Ms. Sue Rubley & Mr. Dwight C. Woodman (Retired), Director (517) 279-9531
 8 West Chicago Street, P.O. Box 469
 Coldwater, MI 49036-0469

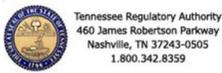
Team: Dennis Schumaker, Patricia Schumaker, and Linda Gottschalk

Developed, performed, and analyzed the results of a customer survey (a follow-up to a survey two years earlier) to assess satisfaction with the city utility and other city services.

Three consultants worked about 200 hours over three months for a total project cost of approximately \$25,000.

Kingsport Power Company***February – September 1996***

Kingsport, Tennessee



Mr. William H. Novak, (former position)
 Tennessee Regulatory Authority
 460 James Robertson Parkway
 Nashville, TN 37243-0505

(800) 342-8359
 now WHN Consulting
 (713) 298-1760
Halnovak@WHNconsulting.com



Ms. Judy Gallo, Senior Rate Coordinator
 American Electric Power Service Corporation
 1 Riverside Plaza, 28th Floor, Rate Department
 Columbus, OH 43215

(614) 578-2209

Team: Dennis Schumaker, Patricia Schumaker, Martin Murphy, Michael Taft, and Linda Gottschalk

Performed a comprehensive management review of an American Electric Power (AEP) operating company. The review included evaluations of customer service, electric operations, and many of the administrative, financial, and technology support activities provided by AEP Service Corporation. Examined the methods used by AEP Service Corporation and Appalachian Power Company (another AEP operating company) for billing for services provided to Kingsport Power Company.

This project, representing \$96,400, involved five consultants over 700 hours of effort during a four-month period.

Michigan South Central Power Agency***December 1995 – June 1997***

Litchfield, Michigan



Mr. Glenn White & Mr. Jack Bierl
 720 Herring Road
 Litchfield, MI 49252

(517) 542-2346

Team: Dennis Schumaker, Patricia Schumaker, Ted Books, and Linda Gottschalk

Developed and implemented a relationship development (key accounts) program aimed at the larger commercial and industrial customers. Developed an ongoing communication/public relations program for the agencies, councils, and member communities.

This project involved four consultants over approximately 1,600 hours of effort during an 18-month period, totaling about \$130,000. Follow-up assignments were subsequently performed.



ELECTRIC UTILITY ASSIGNMENTS

A 1935 Public Utility Holding Company***May 1995 – September 1995***

Confidentiality Requested

Team: Dennis Schumaker, Patricia Schumaker, Robert Wilkinson, Martha King, and Linda Gottschalk

Reviewed charges for services provided by a public utility holding company to its affiliates. The review was used to determine whether the services were reasonable, necessary, non-duplicative and calculated in compliance with appropriate allocation formulas.

This four-month project involved five consultants and approximately 1,000 hours for a total cost of approximately \$150,000.

Michigan South Central Power Agency***December 1994 – December 1995***

Litchfield, Michigan



Mr. Jack Bierl
720 Herring Road
Litchfield, MI 49252

(517) 542-2346

Team: Dennis Schumaker, Patricia Schumaker, Ted Books, and Linda Gottschalk

Assisted in developing a strategic plan for this power agency, owned by five Michigan municipalities: Coldwater, Clinton, Hillsdale, Marshall, and Union City. The plan addressed the changes within the electric utility industry as well as the competitive threats felt by the agency. Performed a competitive assessment and benchmarking of the power agency and surveyed customer attitudes (mail survey to residential and non-residential customers) to identify issues for the strategic plan.

Four consultants spent about 600 hours over a 12-month period on these assignments for a project total of approximately \$50,000.

Pennsylvania Power & Light***February 1993 – June 1994***

Allentown, Pennsylvania



Mr. John Clista, Bureau of Audits
Pennsylvania Public Utility Commission
Bureau of Audits, 400 Third Street
Commonwealth Keystone Bldg, Harrisburg, PA 17105-3265

(717) 772-0317
jclista@state.pa.us



Mr. William Hecht, Chairman, President & CEO
Pennsylvania Power & Light Company
Two North Ninth Street, Allentown, PA 18101-1179

(610) 774-5151

Team: Dennis Schumaker, Patricia Schumaker, Martha King and 17 plus other consultants

Performed a stratified management review, beginning with an initial diagnostic review of all functional areas within the PP&L organization. This task was followed by in-depth investigation of 23 issues that were pre-identified by the PaPUC and PP&L. Such issues included affirmative action/EEO programs; salaries, wages, and benefits; staffing plans and levels; corporate-wide information technology; nuclear de-commissioning; power plant materials management; a competitive assessment of in-house construction; and maintenance work forces. Made 18 major recommendations were made, including the detailed steps necessary for bringing technology up to date. PP&L accepted 153 of 156 recommendations and within a month implemented 30. The utility expected to complete another 50 within six months. Total estimated savings and/or increased efficiency associated with our recommendations exceeded \$70 million (annually) and \$40 million (one time).

This 17-month project involved over 20 consultants and 9,000 to 10,000 hours of effort, for a total project cost of approximately \$911,300.

ELECTRIC UTILITY ASSIGNMENTS

Hillsdale Utilities Department*November 1994*

Hillsdale, Michigan



Mr. Rick Rose
45 Monroe Street, P.O. Box 271
Hillsdale, MI 49242-0271

(517) 437-3387

Team: Dennis Schumaker and Michael Taft

Developed a strategic plan that included a mission statement; identified the organization's strengths, weaknesses, opportunities, and threats; and formulated long-term goals and objectives.

Two consultants spend roughly one month on this project and approximately 55 hours for a total cost of approximately \$4,375.

Central Maine Power Company*February – September 1993*

Augusta, Maine



Ms. Joanne Steneck, Maine Public Utilities Commission
242 State Street, State House Station 18
Augusta, ME 04330-6845

(207) 287-3831

joanne.steneck@maine.gov

Mr. David Flanagan (Retired), President
Central Maine Power Company
83 Edison Drive, Augusta, ME 04336

(207) 623-3521

Team: Patricia Schumaker, Dennis Schumaker, Robert Wilkerson, Martin Murphy, Linda Gottschalk, Paula Skelly, and Martha King

Evaluated CMP's organizational structure and staffing, executive compensation, customer service operations, management efficiency, and cost controls. Our findings and conclusions were referenced when commissioners granted only 31% of \$83 million dollars requested. Savings we identified were credited for \$26 million of the reduction. Following the rate decision, CMP's Board approved an integrated cost-containment plan (with capital and operating budget reductions and a 42% cut in its quarterly dividend); the restructuring saved \$10 million in its first year. CMP emerged a stronger, more viable competitor, on a course to permanent improvement in all aspects of business management.

This seven-month project involved seven consultants and about 2,500 hours of effort, for a total project cost of approximately \$242,400.

Toledo Edison Company*Phase I: August 1991 – December 1991***Cleveland Electric Illuminating Company***Phase II: August 1992 – December 1992*

Columbus, Ohio



Mr. Ray Strom, Project Coordinator
Public Utilities Commission of Ohio
180 East Broad Street, Columbus, OH 43215-3793

(614) 466-7534



Ms. Eileen Mikkelson, Manager
Regulatory Affairs and Revenue Requirements
Centerior Energy, 6200 Oak Tree Boulevard, Independence, OH 44131

(216) 447-2753

Team: Dennis Schumaker, Patricia Schumaker, and Martha King

Investigated the fuel procurement policies and procedures for fossil and nuclear fuels and provided testimony on the findings and conclusions.



ELECTRIC UTILITY ASSIGNMENTS

Public Service Electric and Gas*March 1991 – December 1991*

Newark, New Jersey



Mr. Pete Landrieu, Vice President, Fossil Production
 Public Service Electric and Gas Company
 80 Park Plaza, P.O. Box 570, Newark, NJ 07102

(201) 430-8195

Team: Dennis Schumaker and Patricia Schumaker

Assisted in preparing a long-range strategic generation plan. Assessed PSE&G's computer information systems for generation planning and scenario analysis. Reviewed selected scenarios for political and qualitative considerations and prepared a comprehensive presentation for senior management.

Two consultants spent approximately 2,000 hours of effort over 10 months.

City of Niles Utilities Department*April 1991 – June 1991*

Niles, Michigan



Mr. Bernard A. Van Osdale (Retired), City Administrator
 City of Niles
 508 East Main Street, Niles, MI 49120

(269) 683-4700

Team: Dennis Schumaker, Patricia Schumaker, Joseph Nowicki, Linda Gottschalk

Performed a management and operations review and assisted in developing a long-term action plan. For this 55-person municipal department, we identified potential annual benefits approaching \$250,000.

This three-month engagement involved four consultants and more than 250 hours of effort.

Arkansas Public Service Commission*April 1991 – February 1992*

Little Rock, Arkansas



Ms. Donna Gray
 Director, Audits and Financial Analysis
 Arkansas Public Service Commission
 1000 Center Building, Little Rock, AR 72201

(501) 682-5720

dkgray@psc.state.ar.us**Team: Dennis Schumaker, Patricia Schumaker, and Linda Gottschalk**

Trained Arkansas Public Service Commission (APSC) members on how to monitor and control a management and operations review of Arkansas Power and Light Company and its parent organization, Entergy Corporation. This project included a written and oral review of the proposal and detailed work plan that was prepared by a team of outside consultants selected by APSC to perform the management review. Assisted the APSC in managing the project, which included quality control checks of the outside consultant project team and its results.

This 11-month assignment involved three consultants and approximately 750 hours of effort, for a total project cost of approximately \$95,000.

ELECTRIC UTILITY ASSIGNMENTS

West Texas Utilities Company*December 1989 – October 1990*

Abilene, Texas



Mr. Richard Greffe, Assistant Director

(512) 458-0338

Public Utility Commission of Texas

1701 North Congress Avenue, Austin, TX 78711

Mr. Dennis Sharkey, Vice President Administration

(915) 674-7000

West Texas Utilities Company

301 Cypress Street, Abilene, TX 79601

Team: Dennis Schumaker, Patricia Schumaker, and eight (8) plus other consultants

Performed a comprehensive management and operations review of a wholly owned subsidiary of Central and South West Corporation, a registered public utility holding company. Our review included assessments of all functional areas within WTU, as well as WTU's relationships and transactions with its parent and other affiliate companies. We identified ways to save over \$2.5 million annually. All 85 recommendations were accepted.

This assignment required 11 months, engaging over 10 consultants for 4,500 hours of effort, for a total project cost of approximately \$451,160.

Central Maine Power Company*July 1990 – October 1990*

Augusta, Maine



Ms. Joanne Steneck, Maine Public Utilities Commission

(207) 287-3831

242 State Street, State House Station 18

joanne.steneck@maine.gov

Augusta, ME 04330-6845

Mr. Robert Connell & Mr. Wilbert Whitney

(207) 623-3521

Central Maine Power Company

83 Edison Drive, Augusta, ME 04336

Team: Patricia Schumaker

Performed a focused management review of the implementation of CMP's Customer Service System. Provided testimony at a general rate hearing in which a portion of the implementation costs was disallowed for ratemaking purposes. Mismanagement at CMP led to this ruling.

This four-month assignment included two consultants and approximately 500 hours of effort, for a total project cost of approximately \$48,800.

Ohio Power Company, Columbus Southern Power Company*December 1988 – March 1990*

Columbus, Ohio



Mr. Ray Strom, Project Coordinator

(614) 466-7534

Public Utilities Commission of Ohio

180 East Broad Street, Columbus, OH 43215-3793

Mr. Paul Daley (Retired), Director Rates Department

(614) 687-3033

AEP Service Corporation

1 Riverside Plaza, Columbus, OH 43215

Team: Dennis Schumaker, Patricia Schumaker, and Walter Drabinski

Reviewed the fuel-related practices and procedures of these companies for two consecutive years. Overall organizational structure, management decision processes, and the computer information systems supporting these activities were included in this review. Provided testimony on our findings and conclusions. This 12-month review involved three consultants and more than 1,000 hours of effort.



ELECTRIC UTILITY ASSIGNMENTS

Union Light, Heat and Power

October 1988 – August 1989

Cincinnati, Ohio



Mr. Aaron Greenwell, Director
Kentucky Public Service Commission
211 Sower Blvd., P.O. Box 615, Frankfort, KY 40601

(502) 564-8119
adgreenwel@mail.state.ky.us



Mr. David Zanitsch, Manager, Gas Operations
Cincinnati Gas and Electric Company
139 East Fourth Street, Cincinnati, OH 45202

(513) 287-3356

Team: Dennis Schumaker, Patricia Schumaker, and eight (8) plus other consultants

Performed a management and operations review of ULH&P, a subsidiary of Cincinnati Gas and Electric Company. ULH&P is essentially run as a single company. Our review covered all areas of operations, including management and organization, electric operations (excluding power production and fuels management), gas supply and operations, customer service, financial management, human resources, marketing and external relations, and corporate services. We also reviewed ULH&P's relationships and transactions with its parent company and other affiliate companies.

This 11-month assignment involved more than 10 consultants and 2,000 hours of effort, for a total project cost of approximately \$250,000.

GAS UTILITY ASSIGNMENTS

Equitable Gas Company*January 2009 – May 2010*

Pittsburgh, Pennsylvania



Mr. George Dorow, Audit Supervisor
 Pennsylvania Public Utility Commission
 Bureau of Audits – Western Region, U-PARC Bldg., A-6
 Room 163, 3070 William Pitt Way, Pittsburgh, PA 15238

(412) 820-2600
gdorow@state.pa.us



Mr. Robert Narkevic, Project Coordinator
 Equitable Gas Company
 225 North Shore Drive, Pittsburgh, PA 15212-5861

(412) 395-3248
rnarkevic@eqt.com

Team: Patricia Schumaker, Dennis Schumaker, Lee Burgess, Kerry Laycock, Julia Bodamer, Robert Rosenkoetter, Gail Stopar, and Jaye Kain

Assisted the Pennsylvania Public Utility Commission in a stratified management and operations audit of Equitable Gas Company (EGC), a subsidiary of EQT Corporation, and EGC's relationship with its affiliates. The primary focus was the business components of EGC still subject to regulation by the PaPUC. Specifically, we addressed EGC service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. The objectives included determination of possible improvements for the management and operations of EGC pursuant to Section 522(b) of the Public Utility Code 66 Pa. C.S. §522(b). This audit consisted of two phases: 1) a diagnostic review that assessed the condition of each functional area or business unit against evaluative criteria or expected business practice; and 2) an in-depth analysis of pre-identified areas or issues. This assignment involved eight consultants over roughly 2,312 hours during an 11-month effort, for a total project cost of approximately \$492,584.

Philadelphia Gas Works*October 2007 – December 2008*

Philadelphia, Pennsylvania



Mr. John Clista, Management Audit Supervisor, Bureau of Audits
 Pennsylvania Public Utility Commission
 3rd Floor East, Commonwealth Keystone Bldg.
 400 North St., Harrisburg, PA 17120

(717) 772-0317
jclista@state.pa.us



Mr. Nicholas J. Vaccarino, Director Strategic Development
 Philadelphia Gas Works, 800 W. Montgomery Ave.
 Philadelphia, PA 19122

(215) 684-6790
Nick.Vaccarino@pgworks.com

Team: Patricia Schumaker, Dennis Schumaker, Julia Bodamer, Lee Burgess, Kerry Laycock, Martin Murphy, Robert Rosenkoetter, Gail Stopar, and Jaye Kain

Assisted the Pennsylvania Public Utility Commission (PaPUC) in a stratified management and operations audit of Philadelphia Gas Works (PGW). The primary focus was to review those PGW business components subject to regulation by the PaPUC. Specifically, we addressed PGW service delivery and production, whose costs are borne ultimately by Pennsylvania ratepayers. The objectives included determination of possible improvements for the management and operations of PGW pursuant to Section 522(b) of the Public Utility Code 66 Ps. C.S. §522(b). This audit consisted of two phases: 1) a diagnostic review that assessed the condition of each functional area or business unit against evaluative criteria or expected business practice; and 2) an in-depth analysis of pre-identified areas or issues. These analyses provided specific recommendations for changes in combination with projected costs and potential dollar savings or other quantifiable benefits, if any.

This 14-month engagement involved nine consultants and approximately 2,340 hours, for total project costs of approximately \$526,271.



GAS UTILITY ASSIGNMENTS

PECO Energy Company

Philadelphia, Pennsylvania

June 2006 – August 2007

Mr. John Clista, Management Audit Supervisor & Project Officer,
 Pennsylvania Public Utility Commission
 Bureau of Audits, 3rd Floor East, Commonwealth Keystone Building,
 400 North Street, Harrisburg, PA 17120

(717) 772-0317
jclista@state.pa.us



Mr. Richard A. Schlesinger,
 Senior Rate Specialist & Regulatory Process Lead,
 PECO Energy Co., Regulatory & Governmental Affairs
 2301 Market Street S15-2, Philadelphia, PA 19103

(215) 841-5771
rich.schlesinger@peco-energy.com

Team: Patricia Schumaker, Dennis Schumaker, Julie Bodamer, Lee Burgess, Siegfried Guggenmoos, Kerry Laycock, Martin Murphy, Robert Rosenkoetter, Mary Jane Sinclair, and Gail Stopar

Assisted the Pennsylvania Public Utility Commission (PaPUC) staff in a stratified management and operations audit of PECO Energy Company. This audit consisted of three phases. The first phase involved a diagnostic review that assessed the condition of each functional area or business unit against evaluative criteria or expected business practice. While this review was primarily limited to determining if appropriate management controls, systems and processes are in place, it was of sufficient scope to identify significant problems, if any, requiring additional focused analysis. The second phase entailed an in-depth analysis of pre-identified areas or issues. These analyses were of sufficient depth to provide specific recommendations for changes in combination with projected costs and potential dollar savings or other quantifiable benefits, if any. The third phase constituted an in-depth, focused analysis of two issues (emergency response and GIS) that were approved by the Bureau of Audits as a result of the diagnostic review.

This assignment involved 10 consultants over roughly 4,064 hours of effort during a 13-month period, for a total project cost of approximately \$843,112.

Enbridge

Toronto, Canada

April 2004 – July 2004

Mr. Eric Kobosh & Mr. Andrew Benedict
 OpvanteK

(215) 968-7790
vantage@vantage-mgt-solutions.com



28 South State Street, 2nd Floor
 Newtown, PA 18940

Team: Dennis Schumaker, Patricia Schumaker, Eric Kobosh, and Andrew Benedict

Collaborated on a multimillion-dollar asset management solution delivery to Enbridge, a large energy utility in Canada. Partnered with OpvanteK (previously VMSI) and Accenture as a subcontractor to deliver two major enhancements to Pipe Maintenance Tracking System (PMTS), a gas asset management system. Designed, developed, and implemented enhancements on time and under budget using Microsoft C#.Net, Crystal Reports, and Oracle.

This assignment involved four consultants over a four-month time period totaling approximately 870 hours and \$55,000 in costs.

GAS UTILITY ASSIGNMENTS

New Jersey Board of Public Utilities

July 2000 – October 2000

Elizabethtown Gas Company – NUI Corporation

New Jersey Natural Gas Company – New Jersey Resources Corporation

South Jersey Gas Company – South Jersey Industries Corporation

Newark, New Jersey



Mr. Jim Rekulak, Principal Utility Mgmt Analyst
New Jersey Board of Public Utilities
44 South Clinton, 7th Floor
Trenton, NJ 08609

(609) 292-1355
james.rekulak@bpu.state.nj.us

Team: Dennis Schumaker, Patricia Schumaker, Martin Murphy, John Baron, Martha King, and Karen Sikkenga Conducted compliance audits of the competitive services of New Jersey's gas utilities, specifically South Jersey Gas Company (South Jersey Industries Corporation), New Jersey Natural Gas Company (New Jersey Resources Corporation), and Elizabethtown Gas Company (NUI Corporation), as a part of utility industry restructuring in New Jersey. The purpose was to ensure that the utilities or their related competitive business segments did not have an unfair competitive advantage over other, non-affiliated purveyors of competitive services.

The audits were also conducted to evaluate and review the allocation of costs between the utilities' competitive and non-competitive services. We offered our expert opinion, based on appropriate methodology, as to whether strict separation and allocation of each utility's revenues, costs, assets, risks, and functions existed between the utility's electric and/or gas distribution operations and its related competitive business segments. The audits determined (1) whether cross subsidization existed between utility and non-utility segments within a public utility or holding company; (2) whether the separation of utility and non-utility organizations was reasonable based on the New Jersey Board of Public Utilities (BPU) affiliate relation and fair competition standards; (3) what the effect of the use of utility assets in the provision of non-safety-related competitive services was on ratepayers; (4) what the effect was on utility workers; (5) what the effect of utility practices was on the market for such services; and (6) compliance with New Jersey legislation. The audits provided the BPU with the necessary information to determine whether the competitive services identified were in any way cross-subsidized by the individual utility's regulated activities. They also helped determine the reasonableness of the lump-sum charges (i.e., service contract rates) and time-and-materials charges encountered in a competitive environment.

This assignment involved six consultants over approximately 1,700 hours of effort during a three-month period, for a total project cost of approximately \$357,000.



GAS UTILITY ASSIGNMENTS

Pacific Gas & Electric Company***June 1994 – September 1994***

San Francisco, California



Mr. James Wuehler, California Public Utilities Commission
 CACD: Accounting and Auditing Branch
 California State Building, 505 Van Ness Avenue
 San Francisco, CA 94102-3298

(415) 703-2655



Ms. Karen Forsgard, Project Coordinator
 Pacific Gas & Electric Company
 77 Beale Street, P.O. Box 770000, San Francisco, CA 94177

(415) 973-6069

Team: Patricia Schumaker and six (6) other consultants

Performed a compliance audit of the costs of PG&E's gas pipeline expansion project to determine if the appropriate level of incremental A&G and O&M costs were charged to the project before and after commercial operation in November 1993. Also provided the data needed to forecast the incremental operating costs of expanding interstate and intrastate pipeline operations serving California markets. Reviewed PG&E's integrated pipeline operations that supply natural gas from Canada to California for retail customers, pipeline shippers, and interruptible customers. Our review showed that the intended project costing had been properly implemented, thereby ensuring an equitable distribution of costs between regulated retail customers and unregulated project shippers.

Seven consultants spent approximately 1,500 hours over four months during which Schumaker & Company was one of the subcontractors.

Pennsylvania Gas & Water Company***April 1992 – May 1993***

Wilkes-Barre, Pennsylvania



Mr. John Clista, Supervisor, Bureau of Audits
 Pennsylvania Public Utility Commission
 400 Third Street, Commonwealth Keystone Bldg.,
 P.O. Box 3265, Harrisburg, PA 17105-3265

(717) 772-0317

jclista@state.pa.us

Mr. Robert Lopatto
 Pennsylvania Gas and Water Company
 One PEI Center, Wilkes-Barre, PA 18711-0601

(717) 829-8600

Team: Patricia Schumaker and Martha King

Reviewed PG&W gas operations, cash flow statements, dividends paid to PG&W's parent company (Pennsylvania Enterprises, Inc.), allocation of fees (affiliated relationships and transactions with affiliated companies), management information systems; data processing, staffing and compensation levels, and recruiting, hiring, and promotion. Schumaker & Company served as a subcontractor on this assignment.

Philadelphia Gas Works***1991***

Philadelphia, Pennsylvania



Mr. Thurman Bullock, Commissioner
 Philadelphia Gas Commission
 1515 Arch Street, 9th Floor, Philadelphia, PA 19102

(215) 686-6682



Mr. William Gallagher
 Philadelphia Gas Works
 800 West Montgomery Avenue, Philadelphia, PA 19122

(215) 684-6489

Team: Dennis Schumaker and Patricia Schumaker

Performed a follow-up review two years after a management and operations review that involved examining the results of additional studies recommended during the management audit. Also entailed developing a request for proposal for long-term strategic options.

GAS UTILITY ASSIGNMENTS

Baltimore Gas & Electric*March 1988 – June 1990***Columbia Gas of Maryland****Washington Gas Light**

Baltimore, Maryland



Mr. Charles Kruft, Chief Auditor
 Maryland Public Service Commission
 William Donald Schaefer Tower
 6 St. Paul Street, 16th Floor, Baltimore, MD 21202-6806

(301) 333-6020



Mr. Frank Hollewa, Vice President Gas Supply
 Washington Gas & Light Company
 6801 Industrial Rd., Springfield, VA 22151

(703) 750-4265



Mr. Steve Shaiko, Director Gas Control
 Washington Gas & Light Company
 6801 Industrial Rd., Springfield, VA 22151

(703) 750-4804

Team: Dennis Schumaker, Patricia Schumaker, and Eric Kobosh

Performed a two-year review of gas supply and purchasing practices. This unique project included formal training of Maryland Public Service Commission (MPSC) staff members in gas supply review methods and the establishment of formal MPSC gas purchasing reporting requirements for the three companies beginning in 1989. Schumaker & Company provided oversight to MPSC staff during an internal review of gas supply plans submitted for 1989/90 by these gas distribution companies.

This 27-month assignment involved three consultants and approximately 1,000 hours of effort, for a total project cost of approximately \$99,880.

Western Kentucky Gas*April 1989 – December 1989*

Owensboro, Kentucky



Mr. Aaron Greenwell, Audit Manager
 Kentucky Public Service Commission
 211 Sower Blvd, Frankfort, KY 40601

(502) 564-8119

adgreenwel@mail.state.ky.us

Mr. Earl Fischer (Retired), President
 Western Kentucky Gas Company
 311 West Seventh Street, Owensboro, KY 42302

(502) 685-8000

Team: Dennis Schumaker, Patricia Schumaker, and eight (8) other consultants

Performed a management and operations review that covered all areas of this gas company's operations: management and organization, gas supply and operations, customer service, financial management, human resources, marketing and external relations, and corporate services. Also reviewed WKG's relationships and transactions with its parent company (Atmos Energy Corporation) and other Atmos affiliate companies in Louisiana and West Texas. (WKG's service territory was essentially a rural area with many smaller communities in Kentucky.) This project proved particularly successful in that the results of the study were presented by all three participants – specifically, the WKG president, a Kentucky Public Service Commission representative, and Schumaker & Company's engagement manager – before the Subcommittee on Management Analysis during the NARUC 1990 Summer Meeting.

This nine-month project involved 10 consultants and more than 3,000 hours of effort, for a total project of approximately \$343,360.



GAS UTILITY ASSIGNMENTS

Philadelphia Gas Works*March 1989 – November 1989*

Philadelphia, Pennsylvania



Mr. Thurman Bullock, Commissioner

(215) 686-6682

Philadelphia Gas Commission

1515 Arch Street, 9th Floor, Philadelphia, PA 19102



Mr. Dennis Stinson

(215) 684-6314

Philadelphia Gas Works

800 West Montgomery Avenue, Philadelphia, PA 19122

Team: Dennis Schumaker, Patricia Schumaker, and 13 other consultants

Reviewed all operational areas, including organization structure and planning (corporate policy, philosophy, and strategic planning; corporate and operations planning; organizational structure, authority, and responsibility; human resources; capital program planning; gas operations organization and work-management effectiveness), systems supply; finance and accounting, procurement of outside services and nonfuel commodities, support functions, and quality of service (corporate mission, customer billing, meter reading, customer dispute process, office operations, energy theft, and customer relations).

This nine-month engagement involved 15 consultants and approximately 4,000 hours of effort, for a total project cost of approximately \$400,000.

Peoples Natural Gas Company*June 1986 – July 1987*

Pittsburgh, Pennsylvania



Mr. John Clista, Supervisor, Bureau of Audits

(717) 772-0317

Pennsylvania Public Utility Commission

jclista@state.pa.us

400 Third Street, Commonwealth Keystone Bldg., P.O. 3265

Harrisburg, PA 17105-3265

**Team: Dennis Schumaker and nine (9) other consultants**

Reviewed all areas of this gas distribution company's operations, including gas supply, gas operations finance and accounting, marketing, data processing, and materials management. Made over 100 recommendations for improvement. A subcontractor on this assignment, Schumaker & Company completed its 13-month engagement with 10 consultants in approximately 4,000 hours.

WATER/WASTEWATER UTILITY ASSIGNMENTS

Tennessee-American Water Company***February 2010 – July 2010***

Chattanooga, Tennessee



Mr. Richard Collier, Attorney

(615) 741-3191 X 170

Tennessee Regulatory Authority

Richard.Collier@tn.gov

460 James Robertson Parkway, Nashville, TN 37243

Mr. Michael Miller, Manager, Rates & Regulation

(304) 340-0351

Tennessee-American Water Company

1101 Broad Street, Chattanooga, TN 37401

(now Utilities Analyst at Public Service Commission of West Virginia)

Team: Patricia Schumaker, Dennis Schumaker, Robert Rosenkoetter, Wayne Fossett, Dwight Work, Robert DePriest, Gail Stopar, and Jaye Kain

Schumaker & Company and its subcontractor Work & Greer, PC (Work & Greer), a certified public accounting firm, conducted an affiliate audit of Tennessee-American Water Company (TAWC) at the request of the Tennessee Regulatory Authority (TRA). The audit included an investigation and assessment of the American Water Works Service Company management performance and decisions relating to internal processes and internal controls involving affiliate relationships and transactions, and the resulting recommendations of any management process changes needed for those controls and implementation. Further, the audit evaluated the charges allocated to TAWC, including the efficiency of processes and/or functions performed on behalf of TAWC, as well as the accuracy and reasonableness of the allocation factors utilized.

This assignment involved ten consultants in roughly 304 hours during a 6-month effort for total project costs of approximately \$184,964.

Pennsylvania-American Water Company***August 2007 – August 2008***

Hershey, Pennsylvania



Mr. John Clista, Audit Supervisor, Bureau of Audits

(717) 772-0317

Pennsylvania Public Utility Commission, 3rd Floor East

jclista@state.pa.us

Commonwealth Keystone Building, 400 North Street, Harrisburg, PA 17120

Mr. Louis Tschachler

(717) 533-5000

American Water, 800 Hersheypark Drive, Hershey, PA 17033

louis.tschachler@amwater.com**Team: Patricia Schumaker, Dennis Schumaker, Lee Burgess, Robert Rosenkoetter, Martin Murphy, Kerry Laycock, Gail Stopar, and Jaye Kain**

Assisted the Pennsylvania Public Utility Commission (PaPUC) staff in a stratified management and operations audit of Pennsylvania-American Water Company (PAWC). Specifically, it was intended that the management audit encourage economies, efficiencies or improvements which benefit the utility and its ratepayers and identify which, if any, cost saving measures can be instituted. The ultimate purpose was to explore economically practical opportunities for giving ratepayers lower rates and/or better service. This audit consisted of three phases. The first phase was a diagnostic review assessing the condition of each functional area or business unit against evaluative criteria or expected business practice. While this review was primarily limited to determining if appropriate management controls, systems and processes were in place, it was of sufficient scope to identify significant problems, if any, requiring additional focused analysis. The second phase was an in-depth analysis of pre-identified areas or issues. These analyses were of sufficient depth to provide specific recommendations for changes together with projected costs and potential dollar savings or other quantifiable benefits, if any. The third phase was an in-depth, focused analysis of two issues approved by the Bureau of Audits resulting from the first phase, specifically items in the human resources and water operations areas.

This assignment involved eight consultants in roughly 3,093 hours during a 12-month effort for total project costs of approximately \$651,694.



WATER/WASTEWATER UTILITY ASSIGNMENTS

Water Services Corporation*June 2006 – April 2007*

West Columbia, South Carolina
Northbrook, Illinois



Mr. Willie J. Morgan PE, Program Manager
South Carolina Office of Regulatory Staff Water/Wastewater Department
1441 Main Street, Suite 300, Columbia, SC 29201

(803) 737-0827
wmorgan@regstaff.sc.gov



Mr. Steve Lubertozi, Chief Regulatory Officer
Utilities Inc.
2335 Sanders Road, Northbrook, IL 60062

(847) 498-6440
smlubertozi@uiwater.com

Team: Dennis Schumaker, Patricia Schumaker, Martin Murphy, Gail Stopar, and Jaye Kain

Assisted the South Carolina Office of Regulatory Staff (SOR) staff to conduct a management audit of Water Services Corporation (WSC) with regard to five subsidiary water and wastewater companies operating in South Carolina with a focus on the following three areas: 1) basic corporate decision-making; 2) major operational activities; and 3) staff functions. The final report consisted of audit findings and management recommendations. A cost/benefit analysis accompanied each recommendation. The bottom line of this project focused on WSC was to determine whether the rates charged to the South Carolina ratepayers could be reduced through the implementation of greater efficiencies in organizations, operations, or both. Additionally, another relevant analysis was the determination of whether the ratepayers of South Carolina were being properly and economically served by the range of corporate services provided to the WSC operations in South Carolina by the managers located in both West Columbia and Northbrook. Significant consideration was given to the investigation and quantification of potential benefits that would result from the consolidation or merger of the affiliated companies of WSC.

This assignment involved five consultants in roughly 520 hours during a 10-month effort for a total project cost of approximately \$75,000.

United Water New Jersey*April 1996 – August 1996*

Harrington Park, New Jersey



Mr. Jim Rekulak, Project Officer
State of New Jersey Board of Public Utilities
44 South Clinton, 7th Floor, Trenton, NJ 08609

(609) 292-1355
rekulak@bpu.state.nj.us



Mr. Walton Hill
United Water Management & Services
200 Old Hook Road, Harrington Park, NJ 07640

(800) 664-4552
(Extension 2880)

Team: Dennis Schumaker, Patricia Schumaker, Linda M. Gottschalk, Richard Albani, Edward Amatetti, and Charles Bangert

Analyzed financial management, information technology and other support services, customer service, and human resources in this comprehensive management and operations review. Schumaker & Company was a subcontractor on this assignment, in which six consultants spent 1,500 hours during a five-month period, with fees and expenses totaling \$65,500.

WATER/WASTEWATER UTILITY ASSIGNMENTS

General Waterworks Corporation of Pine Bluff*February 1992 – June 1992*

Pine Bluff, Arkansas



Ms. Donna Gray, Director, Audits and Financial Analysis

(501) 682-5720

Arkansas Public Service Commission

dkgray@psc.state.ar.us

1000 Center Building, Little Rock, AR 72201



UnitedWater.

Mr. Walton Hill, UWM&S

(800) 664-4552

(Formerly General Waterworks Corporation)

(Extension 2880)

200 Old Hook Road, Harrington Park, NJ 07640

Team: Dennis Schumaker, Patricia Schumaker, and two (2) other consultants

Performed a management and operations review, including a review of affiliated relationships and transactions. At the request of the Arkansas Public Service Commission, our final report was submitted as testimony in a general rate hearing of General Waterworks Corporation of Pine Bluffs. This five-month assignment involved four consultants and approximately 500 hours.

Pennsylvania Gas & Water Company*April 1992 – May 1993*

Wilkes-Barre, Pennsylvania



Mr. John Clista, Audit Supervisor, Bureau of Audits

(717) 772-0317

Pennsylvania Public Utility Commission, 400 Third Street,

jclista@state.pa.us

Commonwealth Keystone Bldg., P.O. Box 3265, Harrisburg, PA 17105



Mr. Robert Lopatto

(717) 829-8600

Pennsylvania Gas and Water Company

One PEI Center, Wilkes-Barre, PA 18711-0601

Team: Patricia Schumaker, Cynthia Pepper, and Martha King

Reviewed PG&W gas operations; cash flow statements; dividends paid to PG&W's parent company (Pennsylvania Enterprises, Inc.); allocation of fees (affiliated relationships and transactions with affiliated companies); management information systems; data processing; staffing and compensation levels; and recruiting, hiring, and promotion. Schumaker & Company was a subcontractor on this assignment.

Kentucky-American Water Company*November 1990 – June 1991*

Lexington, Kentucky



Mr. Aaron Greenwell, Audit Manager

(502) 564-3940

Kentucky Public Service Commission

adgreenwel@mail.state.ky.us

211 Sower Blvd., P.O. Box 615, Frankfort, KY 40601



Mr. Robert Edens, General Manager

(606) 268-6317

Kentucky-American Water Company

2300 Richmond Road, Lexington, KY 40502

Team: Dennis Schumaker, Patricia Schumaker, Martin Murphy, Eric Kobosh, Cynthia Pepper, Patrick Baryenbruch, Walter Drabinski, and three (3) plus other consultants

Performed a comprehensive management and operations review involving executive management, corporate planning, operations planning, engineering and construction, transmission and distribution, treatment and pumping, financial systems, customer service and marketing, human resource management, support functions, and comparative analysis. This project also included a review of Kentucky-American's relationships and transactions with its parent company (American Water Works Company) and other affiliate companies (primarily American Water Works Service Company).

This eight-month engagement involved over 10 consultants and 2,000 hours of effort for a total project cost of approximately \$223,307.



WATER/WASTEWATER UTILITY ASSIGNMENTS

Philadelphia Suburban Water Company

September 1989 – September 1990

Philadelphia, Pennsylvania



Mr. John Clista, Supervisor, Bureau of Audits
Pennsylvania Public Utility Commission
400 Third Street, Commonwealth Keystone Bldg.,
P.O. 3265, Harrisburg, PA 17105-3265

(717) 772-0317
jclista@state.pa.us



Mr. Richard Hugus, Vice President and Treasurer
Philadelphia Suburban Water Company
762 Lancaster Avenue, Bryn Mawr, PA 19010

(610) 527-8500

Team: Dennis Schumaker, Patricia Schumaker, William Gilstrap, Eric Kobosh, Patrick Baryenbruch, Cynthia Pepper, Walter Drabinski, and three (3) other consultants

Performed a comprehensive management review involving all company functions. Specific emphasis was placed on staffing and compensation levels, management information systems, allocation of fees from affiliated companies, customer service, engineering and construction, operations and maintenance, water purchase agreements, and capacity planning. This project also included PSW's relationships and transactions with its parent company and other affiliate companies.

This 13-month engagement involved 10 consultants and over 3,000 hours for a total project cost of approximately \$289,400.

C. Schumaker & Company Project Management & Best Practices Knowledgebase

Schumaker & Company takes the protection of information that companies and clients make available to us during the performance of our work very seriously. To ensure that all documents provided are protected, we contract with a local data center that specializes in secure electronic data storage. Documents submitted in response to information requests are electronically uploaded to these secure servers and are available for viewing in a password protected environment. The consultant may print out a copy of any document but is under agreement to shred the document when finished. The data center maintains the servers and guarantees power backup and secure entry to the facility. We at Schumaker & Company continually work to improve our internal processes and provide the maximum level of security and confidentiality for our clients while streamlining the information gathering phase of the audit process. Companies and clients can rest assured knowing that their sensitive information is not being loosely handled on laptops that pass through airports where they might be subject to being lost or stolen. All data is contained within the data center or on password protected memory sticks.

This document provides a high level overview of some of the key technologies and business processes used within Schumaker & Company on all projects.

Project Management Techniques.....	C-1
Project Controls	C-3
Review Standards	C-8
SCHUCO Best Practices Knowledgebase	C-8
SCHUCO Project Management and Administration Tools	C-19
Time and Expense Information Reporting System (TEIRS)	C-45
Schumaker & Company's Data Center Choice	C-46
About Online Tech.....	C-46
Online Tech Avis Farms Center	C-47

Project Management Techniques

A project must be well planned and managed to ensure that the client's objectives are realized and to prevent disruption of the subject entity's operations. In the conduct of comprehensive and focused management and operations audits, Schumaker & Company's project platform addresses both technical and administrative issues. To this end, Schumaker & Company is dedicated to ensuring that a thorough, detailed work plan is developed and executed, and that the project is completed on schedule, within budget.

We use conventional, as well as Schumaker & Company proprietary, project management and control tools and techniques that include (but are not limited to) project meetings, progress or status reporting, tracking and monitoring of project schedules, budget performance monitoring and reporting, issues tracking and resolution, and change control management.

Schumaker & Company searched the market for a project management tool that unified and simplified communication while maintaining a suitable audit trail for consulting engagements. Unfortunately, there were no suitable off-the-shelf software programs on the market that could organize the complex information that consultants collect.

With this in mind, and as a result of our commitment to the principles of the *Project Management Institute*, Schumaker & Company developed a project platform of methodology and tools that consistently apply project management techniques to all our projects so that we could balance the competing demands of:



- ◆ Scope, time, cost, quality
- ◆ Stakeholders with differing needs and expectations
- ◆ Identified requirements (needs) and unidentified requirements (expectations)

The substantial experience of Schumaker & Company in conducting such studies has enabled us to develop effective techniques to control the project, enhance communications among project team members, Client staff, and Company representatives, and assure a quality end product. These techniques have been used in a large number of audits and other reviews, and the experienced team we are proposing is adept at their use. We will modify these techniques as necessary to conform to the specific requirements of this engagement.

We believe the key element to a successful consulting assignment rests on the caliber and qualifications of the project team members. However, the right quality and mix of personnel is necessary, but not sufficient to ensure maximum benefit from an assignment. Effective project management is required to provide for the orchestration of activities, for ongoing feedback and adjustment mechanisms, and for the judicious use of time. Without strong project management and controls, a consultant's time may not be used effectively. Therefore, effective project management is a key element in implementing our approach and is required to:

- ◆ Coordinate the activities and schedules of Schumaker & Company project team members with Client and Company staff.
- ◆ Provide a focus for communications and control among the consulting team, Client staff, and key individuals within the Company
- ◆ Provide ongoing monitoring of project activities. Unforeseen developments or changes in circumstances may warrant changes in emphasis, revisions to the approach in certain areas, or other modifications to work activities. Active project management provides greater assurance that such refinements or redirections will happen when circumstances warrant.
- ◆ Ensure the optimum management of the time available to complete the project. Effective time management is a skill required of experienced professionals. Sound project management can optimize the overall effectiveness of the project team's use of time and provide greater assurance of meeting deadlines and budgets.
- ◆ Provide for the continuous reinforcement of project objectives. In addition, the role of project management is to ensure that the consulting team consistently adheres to the proper perspective in conducting the study.

Beyond these, project management will carry the responsibility for integrating the results of the review into a report that is clear, concise, and relevant. Our project staff will be composed of talented individuals who are experienced in performing and successfully managing these types of projects. Three important lead positions exist in our project team, those being:

- ◆ The *Engagement Manager* provides general oversight and performs a quality assurance role during the assignment.
- ◆ The *Project Manager* is responsible for ensuring that the consultant team is provided with the appropriate resources for completing its activities on a timely basis. This individual is also responsible for ensuring that the work is progressing within planned budget and schedule parameters, and that the work among the various areas is integrated and coordinated. The *Project Manager* is the day-to-day contact for the Schumaker & Company project team.
- ◆ A *Lead Consultant* is designated for each area, and he or she is responsible for executing the technical work plan in that area. The *Lead Consultant* is responsible for meeting task schedules and ensuring the completeness and coherence of work in his/her task areas, including:
 - Conducting the orientation and project planning for their designated area
 - Developing the detailed work plan for the area
 - Managing and conducting the investigations of all activities in their work plan areas and presenting the task briefing in their work plan areas
 - Keeping the *Project Manager* apprised of progress in executing the work plan
 - Managing development of complete task briefings, task reports, and a draft report for their areas of investigation
 - Ensuring a successful consulting project

Project Management Tools

We use several project management and control techniques to ensure that budget, schedule, and quality specifications are achieved. These control mechanisms include project meetings, project critical path method (CPM) scheduling, and working papers/audit trails policies, procedures, and systems. Throughout the course of the operations and performance audit, the project team will conduct numerous interviews and submit an extensive number of information requests. Managing those interviews, as well as those information requests and the documents received, is crucial to the success of a project.

Work Plans

Well-developed work plans lie at the heart of a well-controlled project. As previously explained, in *Step I—Project Orientation and Final Work Plan*, we will prepare more specific work plans for each study area of *Step II—Detailed Review and Analysis*. The work plans will show:

- ◆ Issues and questions to be addressed and reconciled as part of the technical work
- ◆ Key forms of analysis to be developed
- ◆ Data requirements and sources
- ◆ Interview and facility visit requirements
- ◆ Work plan milestones and key review points
- ◆ Budgets for each element

The detailed work plans we develop during *Step I—Project Orientation and Final Work Plan* will be submitted to the Client *Project Coordinator* for review and approval. We will use these documents for our own internal control. A preliminary work plan is provided in *Chapter IV—Areas and Issues for Review*.

Project Controls

The standard approach used by the Schumaker & Company project team in performing operations and performance audits is firmly predicated on the recognized need for direct participation of all parties in the audit process, along with an accompanying free and continuous flow of pertinent information among the involved parties. In order to facilitate these activities, a standardized structure and schedule of meetings has been developed and is followed on each project. Descriptions of these meetings are presented in the following paragraphs.

Weekly Conference Call

It is our normal practice to have a weekly conference call involving commission staff on all of our projects. We have typically used a freeconferencecall.com telephone number to facilitate these calls. The topics that are normally discussed during this call vary as the project progresses, but usually include the following:

Early Phases of Project

- ◆ Status of upcoming interviews and meetings with Company and Client
- ◆ Status of outstanding information requests

Mid Way Though Project

- ◆ Potential issues being identified
- ◆ Status of draft report sections

Near End of Project

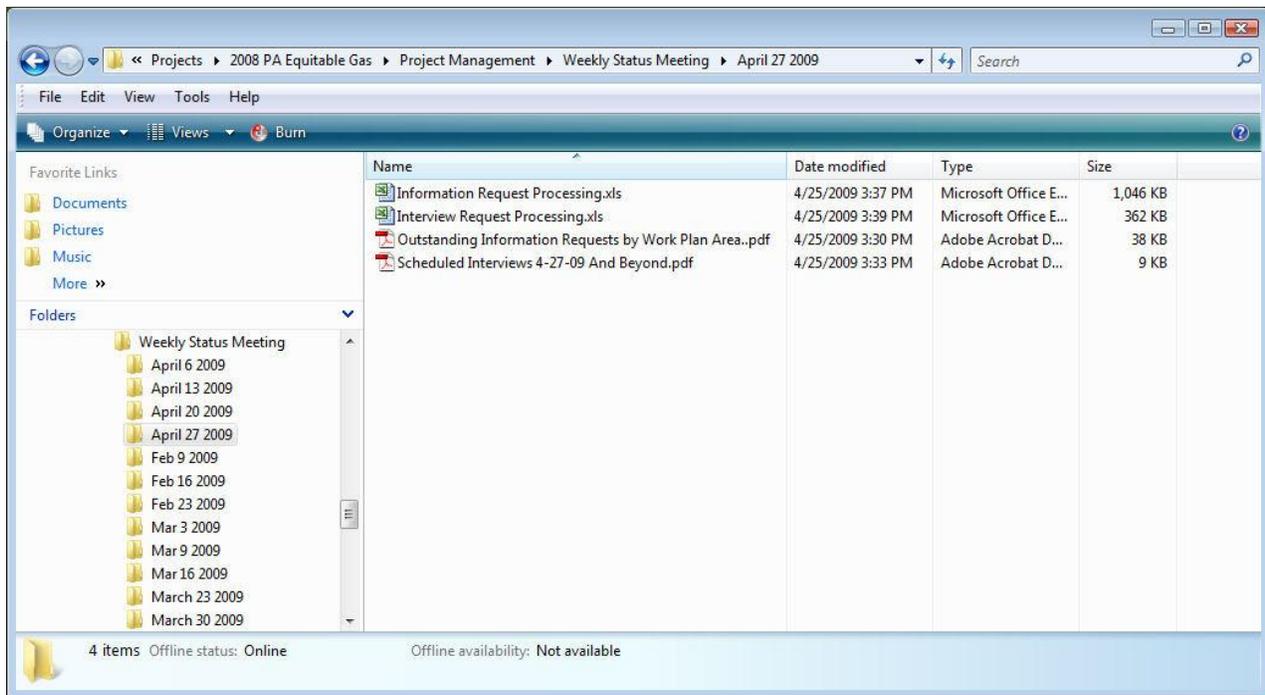
- ◆ Status of draft and final reports

Various reports are generated on a weekly basis and provided to call participants prior to the call. Our *Project Management Information Application (PMLA)* supports various aspects of these weekly progress reports by providing some of the reports that



are discussed during these conference calls. These reports are provided in electronic form prior to the weekly conference call and are also provided with the monthly progress report. Although our system provide various reports, a sample listing of the reports that we normally provide are shown in *Exhibit C-1*.

Exhibit C-1 Examples of Weekly Project Management Reports



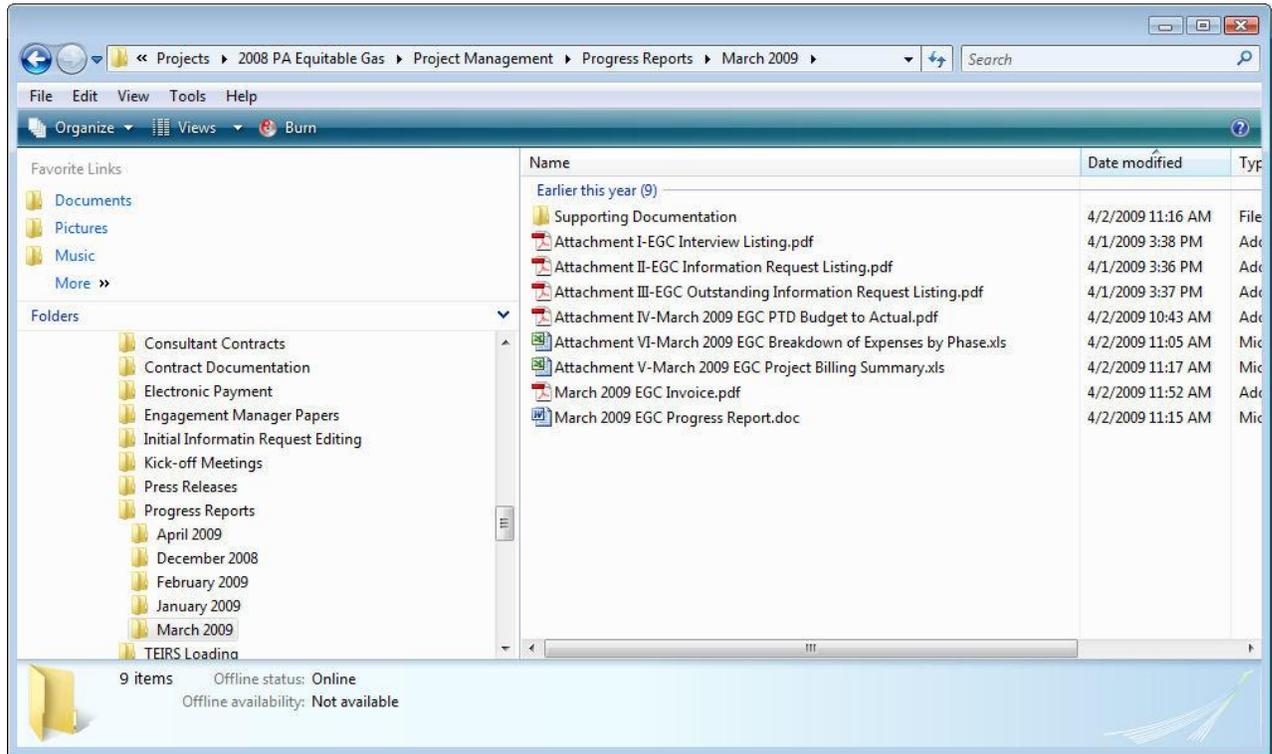
Source: Schumaker & Company PM Manual

Examples of weekly reports provided throughout a project typically include:

- ◆ *Information Request Processing.xls* – An Excel spreadsheet that summarizes information requests by status (pending, issued/outstanding, provisionally received, received complete, received incomplete, and cancelled, scheduled, completed, and cancelled), by status by work plan area, and by due date.
- ◆ *Interview Request Processing.xls* – An Excel spreadsheet that summarizes interviews by status (pending/issued/outstanding, and by work plan area, by location
- ◆ *Outstanding Information Requests by Work Plan Area.pdf* – A detailed listing of all issued/outstanding information requests by work plan area.
- ◆ *Upcoming Scheduled Interviews.pdf* – A detailed listing of any upcoming interviews; unscheduled but requested interviews can also be included as part of this report, if desired.

As task and draft reports are being developed and submitted, we also provide a *Chapter Review Process Responsibilities.xls* spreadsheet that details the status of individual work plan area reports. Other PMIA reports can be generated and provided to commission staff, as desired. Examples of reports that are provided from PMIA as well as our *Time & Expense Information Reporting System* (TEIRS) that can be provided either with our invoice or at the weekly progress meeting nearest month-end are listed in *Exhibit C-2*.

Exhibit C-2 Other Examples of Project Management Reports



Source: Schumaker & Company PM Manual

Exhibit C-29 and *Exhibit C-30* provide a detailed flowchart on interview processing and *Exhibit C-42* and *Exhibit C-43* provide a detailed flowchart on information request processing. These process flows included various different *process* steps that can be reported on to monitor the project's progress. Examples of such summary monitoring reports are shown in *Exhibit C-3*. This shown 173 information requests (out of a total 516 information requests, of which 340 had been received) that were still outstanding (issued) at the time of the report being generated and the corresponding dates they were expected to be received (based on the 10-day turnaround time). Various options can be selected for reports, including detailed listings.



**Exhibit C-3
Example Information Request Status Report
By Status by Work Plan Area**

Count of szDescription	SortBy	Status	WPACode	DueDate										Grand Total			
				1/14/2009	2/16/2009	2/18/2009	2/19/2009	2/24/2009	2/25/2009	2/26/2009	3/2/2009	3/3/2009	3/4/2009				
2	Issued		DEEO	12			5		1							18	
			ExMgt	4													4
			Fin	4							2	5	9				20
			HR	6					7		1						15
			SS-IT	18	1	5		3	3								30
			SS-RM	4							2			1	1		8
			SS-T	1													1
			SS-LE					1									1
			GasS	18													19
			GasOp	16							1						17
			CorpG	2										6			8
			AFF	11								1			1		16
			OP	10													10
			CusS						2	4							6
			Issued Total				106	1	5	5	6	16	6	5	17	1	173
2 Total				106	1	5	5	6	16	6	5	17	1	173			
3	Provisional		DEEO	8			1								9		
			ExMgt	16												16	
			Fin	53									2			84	
			Gen													2	
			HR	20					1							23	
			SS-IT	19					5							25	
			SS-RM	9												12	
			SS-F	15												15	
			SS-T	8												8	
			SS-LE	9		1										10	
			SS-P	9												9	
			GasS	31												34	
			GasOp	8												8	
			CorpG	24												24	
			AFF	6												6	
OP	8												8				
CusS	39												46				
D&S														1			
Provisionally Received Total				282	1	1	6				2		340				
3 Total				282	1	1	6				2		340				
5	Received	Gen											1				
													1				
5 Total														1			
6	Cancelled	Fin											2				
													2				
6 Total														2			
Grand Total				389	1	6	6	12	16	6	5	21	1	516			

Source: Schumaker & Company PM Manual

Similar information *can* be produced for the interviews on the project as shown in *Exhibit C-4*. As previously discussed, various options can be selected for reports, including detailed listings.

Exhibit C-4
Interview Status Report
By Status By Work Plan Area

Count of Interviewee					
StatusSortBy	Status	WPACode	Total		
3	Scheduled	ExMgt	2		
		Fin	3		
		HR	9		
		SS-IT	5		
		CusS	4		
		GasS	2		
		GasOp	8		
		SS-F	1		
		SS-P	1		
		SS-T	1		
		SS-LE	1		
		CorpG	1		
		OP	4		
		Scheduled Total			42
3 Total			42		
4	Completed	DEEO	1		
		ExMgt	1		
		Fin	15		
		GEN	3		
		SS-IT	5		
		SS-RM	1		
		CusS	9		
		GasS	2		
		GasOp	10		
		AFF	2		
		SS-F	1		
		SS-P	1		
		SS-T	1		
		SS-LE	4		
		CorpG	2		
		Completed Total			58
		4 Total			58
5	Cancelled	ExMgt	1		
		Cancelled Total			1
5 Total			1		
Grand Total			101		

Source: Schumaker & Company PM Manual

Client staff will have access to the PMIA via an Internet website. Once awarded the project, Schumaker & Company would provide the Client with the appropriate usernames and passwords to access the website via https: protocol (a common protocol support by all browsers). Your use of the system would be primarily limited to viewing information, interview summaries and information response, and printing reports. This website would be maintained throughout the project, although provisions could be made to make it available after project completion. All information collected during our review will be burned to a DVD and given to the Client for permanent retention.

Periodic Progress Meetings

Schumaker & Company's experience in conducting utility management audits in many states has identified the *need* to have periodic meetings involving appropriate Client and Company representatives. These meetings will be scheduled at the end of each step to facilitate overall communication between the Client, Company, and Schumaker & Company consultants. The meetings are held to discuss any issues that need attention by two or more parties. There will be a midpoint status meeting with Staff that will be scheduled along with any others as needed and will be conducted either at the Client offices, the Company project site, or via teleconference calling, as appropriate. This enables all parties to stay in close contact, including those not as directly associated with the project as the Client and Company *Project Coordinators*.

Audit Trail and Work Papers

The work paper tracking system, used to catalogue key documents, analyses, working papers, and other materials, is a key part of the quality control process. Recommendations made must be in response to specific shortcomings or needs identified



in findings and conclusions. Findings and conclusions, in turn, must be based on information collected in interviews, in data requests, or in analyses performed, and these linkages must be clear. In a number of instances we have been called upon to retrieve these files for use by utilities or commissions long after completion of the project.

Our database-oriented *Project Management Information Application* (PMIA) is a software package specifically developed by Schumaker & Company Information Technology staff to help our *Project Manager* efficiently and effectively control the scheduling of interviews and tracking of information requests and responses during the audit.

We have extensive procedures in place to:

- ◆ Footnote, annotate, and cross reference the draft and final reports to our working papers and the detailed work plan. This capability permits us to completely document the audit trail in preparation of our reports and is tied to the interviews and information requests tracked through PMIA.
- ◆ Schedule and track interviews through PMIA. The numerous summary and detailed reports enable Company personnel, Client staff, and Schumaker & Company project team consultants to easily determine when and with whom interviews are to be (or have been) held.
- ◆ Track the request and receipt of information requests through PMIA. The numerous summary and detailed reports permit effective project management and allow the client to assess the company's response rate.

The use of footnotes forms the basis for annotating our reports. Footnotes are used extensively to identify the source of information that supports a statement of fact, finding, conclusion, or recommendation. As a policy, we require that every fact, quote, result of analysis, or other statement which can be challenged, be footnoted.

All work papers, interview notes, statistical analyses, and other supporting documents developed or obtained during the course of the audit will be made available to the Client staff. At the conclusion of the audit, a copy of the report indexed to the supporting documents will be furnished to the Client staff. All supporting documents, with the exception of interview notes, and all documents obtained by Schumaker & Company during the audit will be turned over to Client staff at the completion of the audit. Interview notes will be retained by Schumaker & Company (or transferred to Client for retention) for at least three years after the completion of the report and will be made available to Client staff. Schumaker & Company will not copyright any material developed during the course of the project.

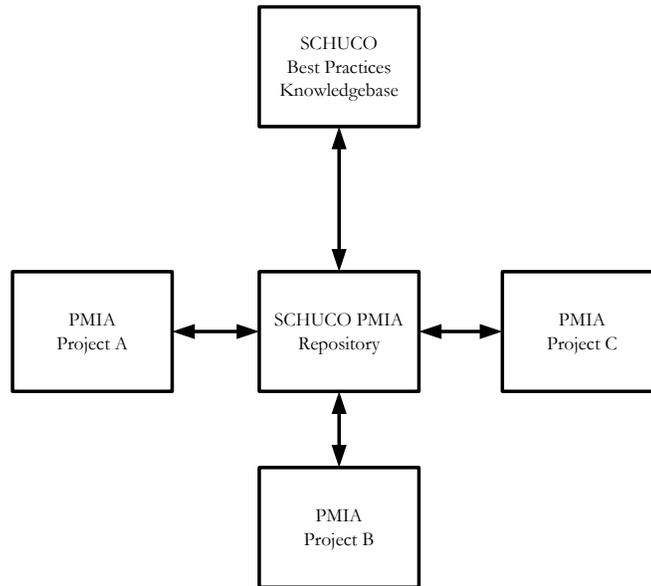
Review Standards

Schumaker & Company subscribes to the audit standards set forth by the National Association of Regulatory Utility Commissioners' "Consultant Standards and Ethics for Performance of Management Analysis," dated November 15, 1989, and the U.S. Government Accountability Office's "Standards for Audit of Government Organizations, Programs, Activities, and Functions," (commonly referred to as the "Yellow Book"), as applicable to public utilities. PMIA has been specifically developed to meet the requirements of these standards.

SCHUCO Best Practices Knowledgebase

Over the last ten years, Schumaker & Company consultants have performed numerous assignments involving the review and assessment of various business practices and processes used with all types of businesses including electric, gas, water, and telecommunications companies, and state and local government entities. All of the information reviewed and interviews conducted have been collected and retained within Schumaker & Company's PMIA website. These information sources are arranged by project, project work plan codes among other categories. In addition, certain information is also tagged with a "Best Practices" designation. If a responsible consultant identifies a business practice or process which he/she believes is an exceptional business practice or process, those particular information source can be identified (flagged) to facilitate easy retrieval some time later. This design is schematically shown in *Exhibit C-5*.

Exhibit C-5
SCHUCO Best Practices Schematic



The **SCHUCO Best Practices Knowledgebase** provides a knowledgebase for readily accessed these Best Practices that have been identified on prior projects by all consultants have been involved on the project. This website accesses all the information that has been collected and retained on the various projects within the PMIA website. Whereas PMIA is typically used on a project by project basis such that only the information from the current PMIA project to which the user is logged in can be worked with or seen, the **SCHUCO Best Practices Knowledgebase** spans all and/or selected information contained within PMIA. PMIA is essentially one database that contains all the information from all SCHUCO projects.

There is no way to upload information to the **SCHUCO Best Practices Knowledgebase**. The uploading of information is done on an individual project by project basis using PMIA. However, the **SCHUCO Best Practices Knowledgebase** permits the selecting, sorting and viewing of information from all PMIA projects. Currently the Best Practices website is only accessible from with the Schumaker & Company network. Future plans are to make this website accessible from outside the Schumaker & Company firewall. When the Best Practices website is accessible from outside the Schumaker & Company firewall it will require both a network and a website logons.

Knowledgebase Login

Shown in *Exhibit C-6* is the log on window. The user will enter his/her Schumaker & Company network credentials. The username should be in following format: username@schuco.com. Select the **OK** button to continue.



Exhibit C-6
SCHUCO Network Logon Window



If the user is already logged in to the Schumaker & Company network, then the user will not be shown the log in screen but will proceed to the Best Practices logon page. In *Exhibit C-7*, the logon window for Best Practices access is shown. Enter your username as “admin” and designated password and select the **Sign In** button. Currently only Schumaker & Company administrators can access the Best Practices website. Future plans may include allowing consultants to access this site as well.

Information Knowledgebase

This module permits the searching of all information reports received on Schumaker & Company projects for the identification of Best Practices or other general searches.

Information Knowledgebase Configuration

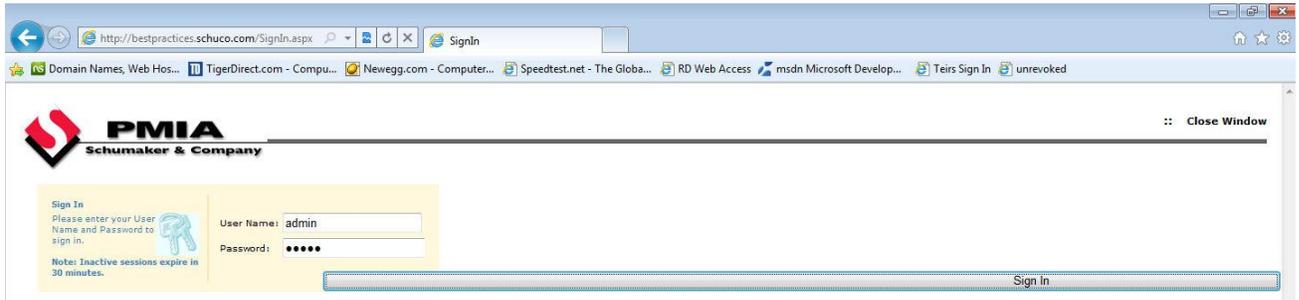
The questions that need to be answered to being your search are calling the configuration parameters:

- ◆ Which projects do you want to search across?
- ◆ What work plan areas in those projects do you want to search across?
- ◆ Do you want to do just a ‘Best Practices’ search or a general search?
- ◆ What lead consultant on a project do you want to search across?
- ◆ What date range (issue date) do you want to search across?

Singing In

Signing into the Best Practices website is easy and shown in *Exhibit C-7*.

Exhibit C-7 Log In



After you enter your credentials and press **Sign In** you will see the Summary page shown in Exhibit C-8.

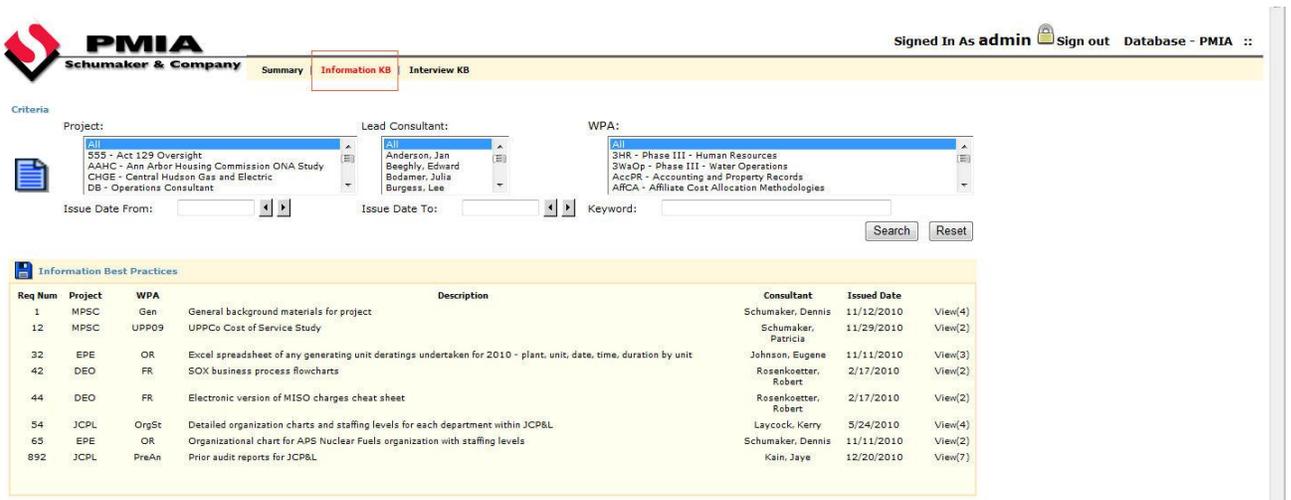
Exhibit C-8 BP Summary Page



Information Knowledgebase Features

After clicking on the Information KB tab the *Administrator* will see the *Information List* window shown in Exhibit C-31. The *Information List* window shows the user the information requests that are currently marked as best practices in *PMIA* for all projects.

Exhibit C-9 Information Window



The *Information Request* window shows the **Req Num, WPA, Description, Consultant** and **Issued Date**.

Filtering

There are many different ways the Administrator can filter the Information Responses in the Best Practices website.

Filter by Project

The user can filter for a specific project by using **Project** drop down and clicking on Search as shown in *Exhibit C-10*. The list of Projects will appear in alphabetical order.

Exhibit C-10
Filter by Project

PMIA Schumaker & Company | Summary | **Information KB** | Interview KB | Signed In As admin | Sign out | Database - PMIA ::

Criteria

Project: EPE - NM Fuel and Purchased Power Audit of El Paso
 Lead Consultant: All
 WPA: All
 Issue Date From: Issue Date To: Keyword:

Information Best Practices

Req Num	Project	WPA	Description	Consultant	Issued Date	
32	EPE	OR	Excel spreadsheet of any generating unit deratings undertaken for 2010 - plant, unit, date, time, duration by unit	Johnson, Eugene	11/11/2010	View(3)
65	EPE	OR	Organizational chart for APS Nuclear Fuels organization with staffing levels	Schumaker, Dennis	11/11/2010	View(2)

Filter by Date

The user can filter for specific dates by using the “Issue Date From” and “Issue Date To” as shown in *Exhibit C-11*.

Exhibit C-11
Filter by Date

PMIA Schumaker & Company | Summary | **Information KB** | Interview KB | Signed In As admin | Sign out | Database - PMIA ::

Criteria

Project: All
 Lead Consultant: All
 WPA: All
 Issue Date From: 11/1/2010 Issue Date To: 11/30/2010 Keyword:

Information Best Practices

Req Num	Project	WPA	Description	Consultant	Issued Date	
1	MPSC	Gen	General background materials for project	Schumaker, Dennis	11/12/2010	View(4)
12	MPSC	UPPD9	UPPCo Cost of Service Study	Schumaker, Patricia	11/29/2010	View(2)
32	EPE	OR	Excel spreadsheet of any generating unit deratings undertaken for 2010 - plant, unit, date, time, duration by unit	Johnson, Eugene	11/11/2010	View(3)
65	EPE	OR	Organizational chart for APS Nuclear Fuels organization with staffing levels	Schumaker, Dennis	11/11/2010	View(2)

Filter by Lead Consultant

The user can filter by “Lead Consultant” by using the Lead Consultant drop down shown in *Exhibit C-12*. The list of Lead Consultants will appear in alphabetical order.

Exhibit C-12
Filter by Lead Consultant

The screenshot shows the PMIA web application interface. At the top, it says "Signed In As admin" with "Sign out" and "Database - PMIA" links. The navigation menu includes "Summary", "Information KB", and "Interview KB". The "Criteria" section has three dropdown menus: "Project" (with options like "555 - Act 129 Oversight", "AAHC - Ann Arbor Housing Commission ONA Study", "CHGE - Central Hudson Gas and Electric", "DB - Operations Consultant"), "Lead Consultant" (highlighted with a red box, with options like "Schumaker, Dennis", "Schumaker, Patricia", "Simon, Mike", "Sinclair, Mary Jane", "Sinhuchas, Krittalak"), and "WPA" (with options like "3HR - Phase III - Human Resources", "3waOp - Phase III - Water Operations", "AccPR - Accounting and Property Records", "AFCA - Affiliate Cost Allocation Methodologies"). There are also "Issue Date From:" and "Issue Date To:" fields, and a "Keyword:" field. "Search" and "Reset" buttons are present. Below the filters is a table titled "Information Best Practices":

Req Num	Project	WPA	Description	Consultant	Issued Date	
1	MPSC	Gen	General background materials for project	Schumaker, Dennis	11/12/2010	View(4)
65	EPE	OR	Organizational chart for APS Nuclear Fuels organization with staffing levels	Schumaker, Dennis	11/11/2010	View(2)

Filter by WPA

The user can filter by WPA as shown in *Exhibit C-13*. The list of Work Plan Areas will appear in alphabetical order.

Exhibit C-13
Filter by WPA

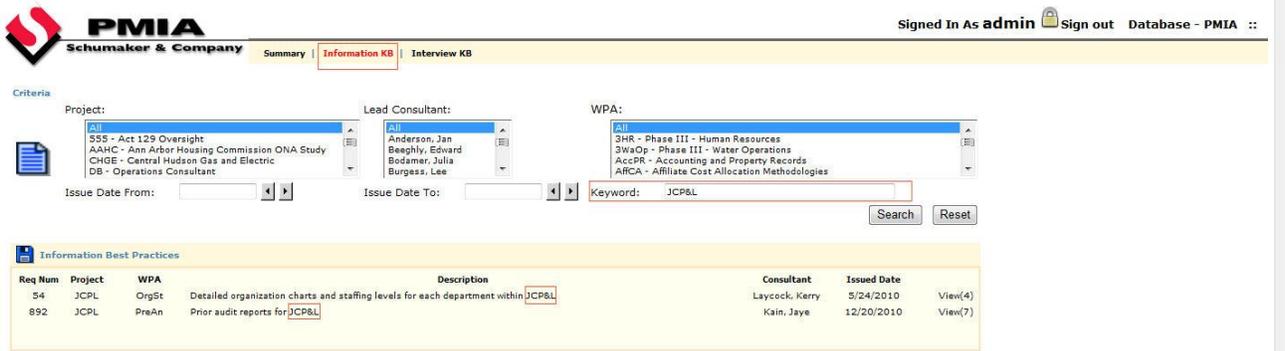
The screenshot shows the PMIA web application interface. At the top, it says "Signed In As admin" with "Sign out" and "Database - PMIA" links. The navigation menu includes "Summary", "Information KB", and "Interview KB". The "Criteria" section has three dropdown menus: "Project" (with options like "555 - Act 129 Oversight", "AAHC - Ann Arbor Housing Commission ONA Study", "CHGE - Central Hudson Gas and Electric", "DB - Operations Consultant"), "Lead Consultant" (with options like "Anderson, Jan", "Bagshly, Edward", "Bodamer, Julia", "Burgess, Lee"), and "WPA" (highlighted with a red box, with options like "FR - Financial Review", "FuelCa - FuelPR - Fuel Calculations", "FuelC - Fuel Clause", "FuelPr - MgtPR - Fuel Prices", "FuMGT - MgtPR - Fuel Management"). There are also "Issue Date From:" and "Issue Date To:" fields, and a "Keyword:" field. "Search" and "Reset" buttons are present. Below the filters is a table titled "Information Best Practices":

Req Num	Project	WPA	Description	Consultant	Issued Date	
42	DEO	FR	SOX business process flowcharts	Rosenkoetter, Robert	2/17/2010	View(2)
44	DEO	FR	Electronic version of MISO charges cheat sheet	Rosenkoetter, Robert	2/17/2010	View(2)

Filter by Keyword

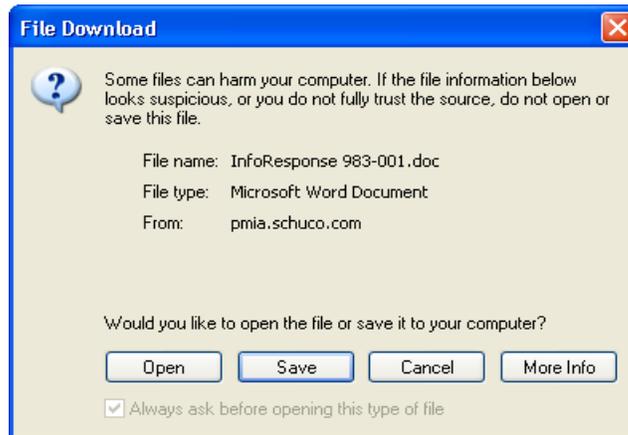
The user can also type in a search criteria in the Keyword text box next to the **Search** button in the **Filter Results** section. This search will perform a search on the Description, Comments and Title fields as shown in *Exhibit C-32*.

**Exhibit C-14
Filter by Keyword**



The user will select **View** for the response the user wants to view. Upon receiving a document, it will be numbered and in sequential order. The numbering system determines what order the document was received. After selecting **View**, the user will be shown the window in *Exhibit C-40*. This lets the user know the File name, File type and from where. To open the document, select the **Open** button and the document will open. To disregard opening the document, select the **Cancel** button.

**Exhibit C-15
File Download Window**



Interview Knowledgebase

This module permits the searching of all interview reports received on Schumaker & Company projects for the identification of Best Practices or other general searches.

Interview Knowledgebase Configuration

The questions that need to be answered to being your search are calling the configuration parameters:

- ◆ Which projects do you want to search across?
- ◆ What work plan areas in those projects do you want to search across?
- ◆ Do you want to do just a 'Best Practices' search or a general search?

- ◆ What lead consultant on a project do you want to search across?
- ◆ What date range (issue date) do you want to search across?

Singing In

Signing into the Best Practices website is easy and shown in *Exhibit C-16*.

Exhibit C-16 Log In

After you enter your credentials and press **Sign In** you will see the Summary page shown in *Exhibit C-17*.

Exhibit C-17 BP Summary Page

Interview Knowledgebase Features

After clicking on the Interview KB tab the *Administrator* will see the *Interview List* window shown in *Exhibit C-18*. The *Interview List* window shows the user the Interview requests that are currently marked as best practices in *PMIA* for all projects.

Exhibit C-18 Interview Window

The screenshot shows the PMIA Interview Window interface. At the top, it says "Signed In As admin" with "Sign out" and "Database - PMIA" links. The navigation menu includes "Summary", "Information KB", and "Interview KB".

Criteria:

- Project:** All (dropdown menu)
- Lead Consultant:** All (dropdown menu)
- WPA:** All (dropdown menu)
- Issue Date From:** (empty text box)
- Issue Date To:** (empty text box)
- Keyword:** (empty text box)

Search and Reset buttons are located at the bottom right of the criteria section.

Interview Best Practices Table:

Req Num	Project	WPA	Description	Consultant	Issued Date
2	EPE	FR	Job Responsibilities relative to FPP and ESP. Changes since 2009 audit.	Schumaker, Patricia	12/7/2010
2	DEO	FR	Overview of organization structure and policy, procedures, and practices that directly or indirectly impact FPP/CAC results, plus any particular EPE issues, including but not limited to Palo Verde 3 proxy pricing.	Schumaker, Patricia	1/29/2010
9	EPE	OR	Job Responsibilities relative to FPP and ESP.	Vondle, David	12/7/2010
12	JCPL	ExtMgt	Overview of department and responsibilities.	Burgess, Lee	6/2/2010
21	DEO	FR	Work Plan Orientation Interviews - Roles and Responsibilities, Goals and Objectives	Rosenkoetter, Robert	3/2/2010
22	DEO	FR	Description of job duties and responsibilities (not discussed during last trip due to snow storm)	Rosenkoetter, Robert	3/2/2010
22	JCPL	SS-RM	Description of job duties and responsibilities (not discussed during last trip due to snow storm)	Burgess, Lee	6/2/2010
22	JCPL	SS-RM	Work Plan Orientation Interviews - Roles and Responsibilities, Goals and Objectives	Burgess, Lee	6/2/2010
33	JCPL	Ext	Work Plan Orientation Interviews - Roles and Responsibilities, Goals and Objectives	Johnson, Eugene	6/15/2010

The *Interview Request* window shows the **Req Num, WPA, Description, Consultant** and **Issued Date**.

Filtering

There are many different ways the Administrator can filter the Interview Responses in the Best Practices website.

Filter by Project

The user can filter for a specific project by using **Project** drop down and clicking on **Search**. **The list of Projects will appear in alphabetical order.**

Filter by Date

The user can filter for specific dates by using the "Issue Date From" and "Issue Date To" as shown in *Exhibit C-19*.

Exhibit C-19 Filter by Date

The screenshot shows the PMIA Interview Window interface with date filters applied. At the top, it says "Signed In As admin" with "Sign out" and "Database - PMIA" links. The navigation menu includes "Summary", "Information KB", and "Interview KB".

Criteria:

- Project:** All (dropdown menu)
- Lead Consultant:** All (dropdown menu)
- WPA:** All (dropdown menu)
- Issue Date From:** 6/1/2010
- Issue Date To:** 6/30/2010
- Keyword:** (empty text box)

Search and Reset buttons are located at the bottom right of the criteria section.

Interview Best Practices Table (Filtered):

Req Num	Project	WPA	Description	Consultant	Issued Date
12	JCPL	ExtMgt	Work Plan Orientation Interviews - Roles and Responsibilities, Goals and Objectives	Burgess, Lee	6/2/2010
22	JCPL	SS-RM	Work Plan Orientation Interviews - Roles and Responsibilities, Goals and Objectives	Burgess, Lee	6/2/2010
33	JCPL	Ext	Work Plan Orientation Interviews - Roles and Responsibilities, Goals and Objectives	Johnson, Eugene	6/15/2010

Filter by Lead Consultant

The user can filter by “Lead Consultant” by using the Lead Consultant drop down shown in *Exhibit C-20*. The list of Lead Consultants will appear in alphabetical order.

Exhibit C-20
Filter by Lead Consultant

Criteria

Project: [All] | 555 - Act 129 Oversight | AAHC - Ann Arbor Housing Commission ONA Study | CHGE - Central Hudson Gas and Electric | DB - Operations Consultant

Issue Date From: [] | Issue Date To: []

Lead Consultant: [Schumaker, Patricia] | [Simon, Mike] | [Sinclair, Mary Jane] | [Sinthuchat, Krittalak] | [Smith, John]

WPA: [All] | 3HR - Phase III - Human Resources | 3WtOp - Phase III - Water Operations | AccPR - Accounting and Property Records | ARCA - Affiliate Cost Allocation Methodologies

Keyword: []

[Search] [Reset]

Req Num	Project	WPA	Description	Consultant	Issued Date	
2	EPE	FR	Overview of organization structure and policy, procedures, and practices that directly or indirectly impact FPPCAC results, plus any particular EPE issues, including but not limited to Palo Verde 3 proxy pricing.	Schumaker, Patricia	12/7/2010	
2	DEO	FR	Job Responsibilities relative to FPP and ESP	Schumaker, Patricia	1/29/2010	View(1)

Filter by WPA

The user can filter by WPA as shown in *Exhibit C-21*. The list of Work Plan Areas will appear in alphabetical order.

Exhibit C-21
Filter by WPA

Criteria

Project: [All] | 555 - Act 129 Oversight | AAHC - Ann Arbor Housing Commission ONA Study | CHGE - Central Hudson Gas and Electric | DB - Operations Consultant

Issue Date From: [] | Issue Date To: []

Lead Consultant: [All] | [Anderson, Jan] | [Beeghly, Edward] | [Bodamer, Julia] | [Burgess, Lee]

WPA: [FR - Financial Review] | [FuelCa - FinPR - Fuel Calculations] | [FuelC - Fuel Clause] | [FuelPr - MgtPR - Fuel Prices] | [FuelMGT - MgtPR - Fuel Management]

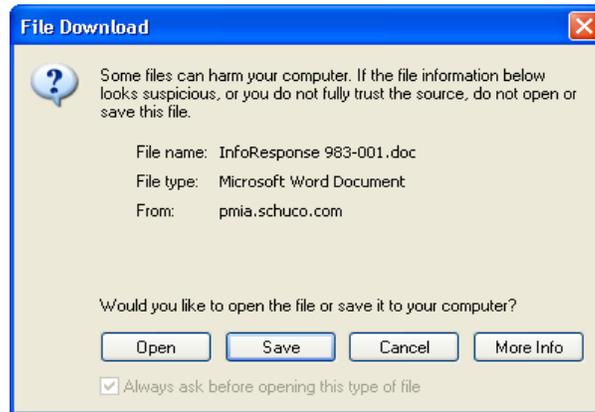
Keyword: []

[Search] [Reset]

Req Num	Project	WPA	Description	Consultant	Issued Date	
2	EPE	FR	Overview of organization structure and policy, procedures, and practices that directly or indirectly impact FPPCAC results, plus any particular EPE issues, including but not limited to Palo Verde 3 proxy pricing.	Schumaker, Patricia	12/7/2010	
2	DEO	FR	Job Responsibilities relative to FPP and ESP	Schumaker, Patricia	1/29/2010	View(1)
21	DEO	FR	Description of job duties and responsibilities (not discussed during last trip due to snow storm)	Rosenkoetter, Robert	3/2/2010	View(1)
22	DEO	FR	Description of job duties and responsibilities (not discussed during last trip due to snow storm)	Rosenkoetter, Robert	3/2/2010	View(1)

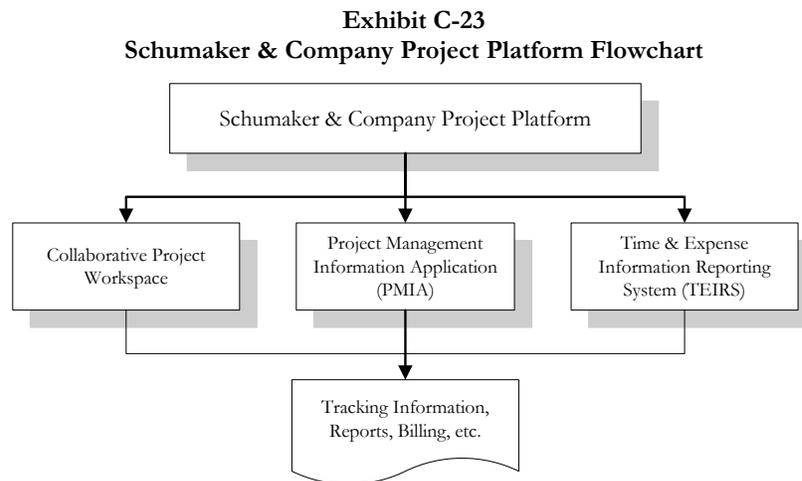
The user will select **View** for the response the user wants to view. Upon receiving a document, it will be numbered and in sequential order. The numbering system determines what order the document was received. After selecting **View**, the user will be shown the window in *Exhibit C-22*. This lets the user know the File name, File type and from where. To open the document, select the **Open** button and the document will open. To disregard opening the document, select the **Cancel** button.

Exhibit C-22
File Download Window



SCHUCO Project Management and Administration Tools

Combining computer technology and the Internet, Schumaker & Company developed a package of tools which enhanced collaboration with document management and issue tracking. We integrated the best of various commercially available tools and technologies, along with our own, to make communicating and sharing project information easier. This is especially beneficial when working a large multi-dimension project. A Schumaker & Company project platform is described in the flowchart shown in *Exhibit C-23*.



Proven by over 30 major projects, Schumaker & Company has succeeded in increasing the quality and velocity of communication helping to build more effective business teams. Teams that eliminated manual workflows with minimal customization and realized direct benefits through cost savings and enhanced delivery of services.

Collaborative Project Workspace

A project workspace website, based on Microsoft Windows SharePoint Services, created at project start-up allows the team to share and manage documents quickly, track issues, allow authorized users to create custom views, and prevent unauthorized access to sensitive information.

Microsoft Windows SharePoint Services provides a place where a team can communicate, share documents, and work together on a project. SharePoint sites allow facilitation of team participation in discussions, information capture and sharing, document collaboration, and surveys—benefits that help increase individual and team productivity. Document collaboration features permit simple check in, check out, and document version control. In addition, team and site managers can coordinate site content and user activity easily.

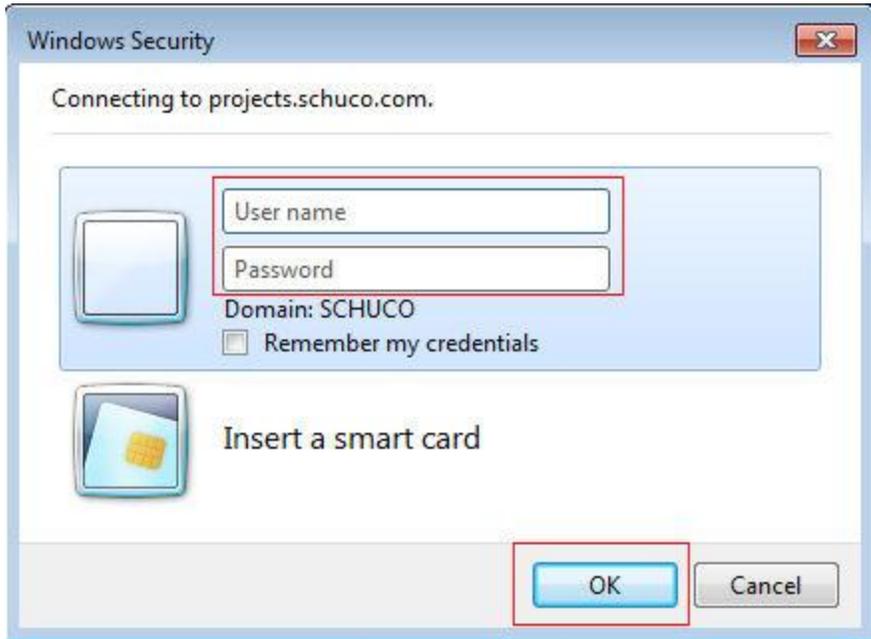
An example of your Schumaker & Company developed project workspace is shown in *Exhibit C-25*.

SharePoint Login

Shown in *Exhibit C-24* is the log on window. The user will enter his/her Schumaker & Company network credentials. The username should be in following format: username@schuco.com. Select the **OK** button to continue.

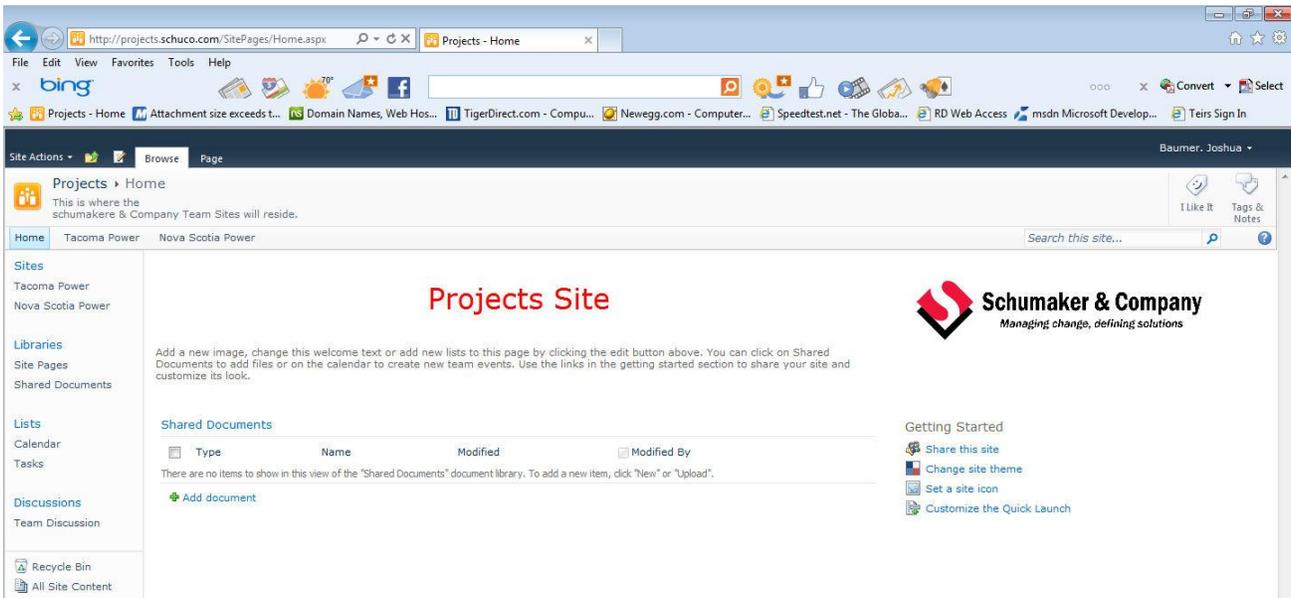


Exhibit C-24
Schuco Network Login for SharePoint



If the user is already logged in to the Schumaker & Company network, then the user will not be shown the log in screen but will proceed to the Projects SharePoint website shown in *Exhibit C-25*.

Exhibit C-25
Project Workspace Example



Security

The project workspace uses standard communication protocols to transmit information over the Internet and site groups to manage security across a site. Support for the **HTTPS** protocol allows each session to be individually secured and encrypted to protect sensitive data.

User IDs and site groups are used to manage security across a site. Each user must be a member of at least one site group in order to view or access a site and each site group possesses corresponding rights, which are rules associated with the system as a whole, granted to local groups, global groups, and users.

Accessibility

Information, such as events, to-do items, and names and phone numbers of people with whom the team communicates, can be viewed or added to the site. Such site content is accessible from both a Web browser and through clients that support Microsoft Web Services.

Microsoft Office 2010 programs can read and edit site content, and Microsoft Office Outlook 2010 allows site event calendars to be viewed side-by-side with personal calendars. It also creates meeting-specific workspaces to augment group appointments.

Individual Empowerment

Issue tracking improves the efficiency and effectiveness of project management, because it allows you to communicate about problems and related action items with team members and stakeholders. Issue tracking provides rich reporting, status indications, e-mail notifications, and alerts to help ensure that issues that come up during the completion of a project get attention and are resolved. Issues can be associated with projects, tasks, documents, and other issues.

Project workspace members can find and communicate with key contacts and experts, both by e-mail and with instant messaging. Site content can be easily searched, and users can receive alerts to tell them when existing documents and information have been changed, or when new information or documents have been added. Users can also do the following:

- ◆ Post documents to share with other team members
- ◆ Hold newsgroup-style discussions
- ◆ Take a poll of the team to make a decision

As team members add or delete documents, lists, discussions, and surveys, the project workspace automatically updates links to the content so that it's always easy to find.

Site pages display lists of information, allowing team members the ability to organize the information any way they want, such as by subject, due date, or author. For example:

- ◆ Restricting the display to see only the set of information that applies to a particular user
- ◆ Hiding information that doesn't interest a user
- ◆ Changing the order in which the information is listed
- ◆ Setting up customized views to make it easy for team members to focus quickly on pertinent information

Project Management Information Application (PMIA)

To unify and simplify communication while maintaining an audit trail for consulting engagements, Schumaker & Company developed *Project Management Information Application (PMIA)*, a proprietary software program that integrated the teachings of the *Project Management Institute*.

PMIA performs a variety of important tasks through a standard web browser, including:

- ◆ Creating a standardized and accurate information collection process
- ◆ Tracking interview and information requests that easily identify fulfillment delays
- ◆ Establishing interview times with specific time and range and tracking confirmations



- ◆ Organizing document filing and retrieval through a built-in cross-referencing system between the database and paper files
- ◆ Permitting searches on the database by keyword, subject and many other criteria, allowing for quick and easy information identification and retrieval
- ◆ Giving managers instant summaries of the project through numerous reports
- ◆ Allowing information requests and reports to be sent electronically
- ◆ Providing a consistent structure for interview summaries

We are committed to establishing project administrative procedures that will facilitate the conduct of our projects without placing any undue burdens on any of the involved parties, thereby ensuring that the project's scope is identified, agreed upon, and controlled.

The *Project Management Information Application* (PMIA) gives the ability to request documents from clients, retrieve documents, and request interviews with clients, consultants or anyone working on the project. It provides a collection of organized information.

PMIA Access

PMIA is on a secure internet connection. PMIA allows consultants the ability to enter and edit pending information and interview requests. It allows consultants the ability to search/filter requests, print reports, view information responses and interview summaries and download information. It also has the ability to view calendar of interviews and information requests. This application also has the ability to burn interview summaries and information responses to CD. Once uploaded, interview summaries and information responses are read only. It allows a flexible way to issue information and interview request. Request interview times with specific time and range, and the ability for clients and companies to confirm interviews. It has the ability to upload information responses to the client site and allowing for two stages of confirmation. Specific user security features are built into PMIA. The web address for PMIA is: <https://pmia.schuco.com>.

PMIA allows consultants to enter and edit pending information and interview requests, view a calendar of these requests, search and filter requests, print reports, view information responses and interview summaries, and download information. *PMIA* also has the ability to burn interview summaries and information responses to CD for times when internet service is not available or to minimize project management/paper activities.

There are different levels of security built into the application. *Exhibit C-26* shows who has access to what.

**Exhibit C-26
Security Access**

	A	B	C	D	E	F
	PMIA Consultant User	Right Used	PMIA Consultant User	PMIA Company User	PMIA Client User	PMIA Administration User
1						
8	Info Request Reports	6	X	X	X	X
9	Cancel Information Request	24	X			X
10	Mark Information Requests Received Complete	25	X			X
11	Edit Information Request Button	26	X	X	X	X
12	Delete Information Request Button	27	X			x
13	Interview Requests					
14	Enter Interview Requests	7	X			X
15	Issue Interview Requests	8				X
16	Confirm Interview Schedule	9		X		X
17	Receive/Upload Interview Summary	10	X			X
18	View Interview Calendar	11	X	X	X	X
19	User List	12	X		X	X
20	View Interview Summaries	13	X		X	X
21	Interview Request Reports	14	X	X	X	X
22	Cancel Interview Request	23	X			X
23	Edit Interview Request Button	28	X	X	X	X
24	Delete Interview Request Button	29	X			X
25	Project Setup					
26	Clients	15				X
27	Companies	16				X
28	Consultants	17				X
29	Handling Types	18				X
30	Project Information	19				X
31	Work Plan Area	20				X
32	Company Representatives	21				X
33	Project Setup Report	22				X
34	Project setup	30				X

Shown in *Exhibit C-27* is the network logon window. The user will enter his/her Schumaker & Company network credentials. The username should be in following format: username@schuco.com. Select the **OK** button to continue. Otherwise, select the **Cancel** button to disregard this login.



Exhibit C-27
Network Logon Window



If the user is already logged in to the network, then the user will not be shown the log in screen but will proceed to the PMIA logon page. In *Exhibit C-28*, the logon window for PMIA access is shown. Enter your username as "schuco" and designated password and select the **Sign In** button. These passwords will enable you to update your interview and information requests.

Exhibit C-28
PMIA Logon Window



Information Request/Response Business Processes

This is where the information requests are entered and listed. The information business processes for PMIA are shown in *Exhibit C-29* and *Exhibit C-30*.

Exhibit C-29 Information Process

Information Request Business Process

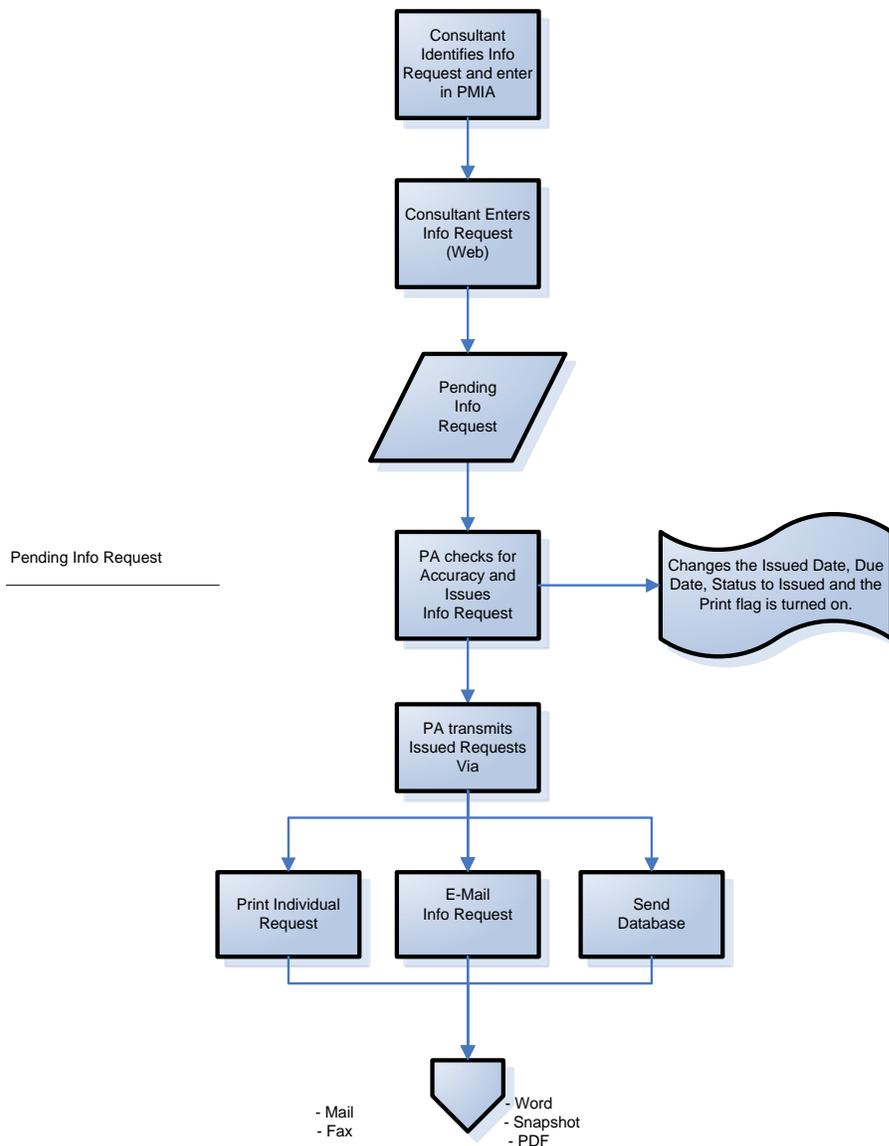
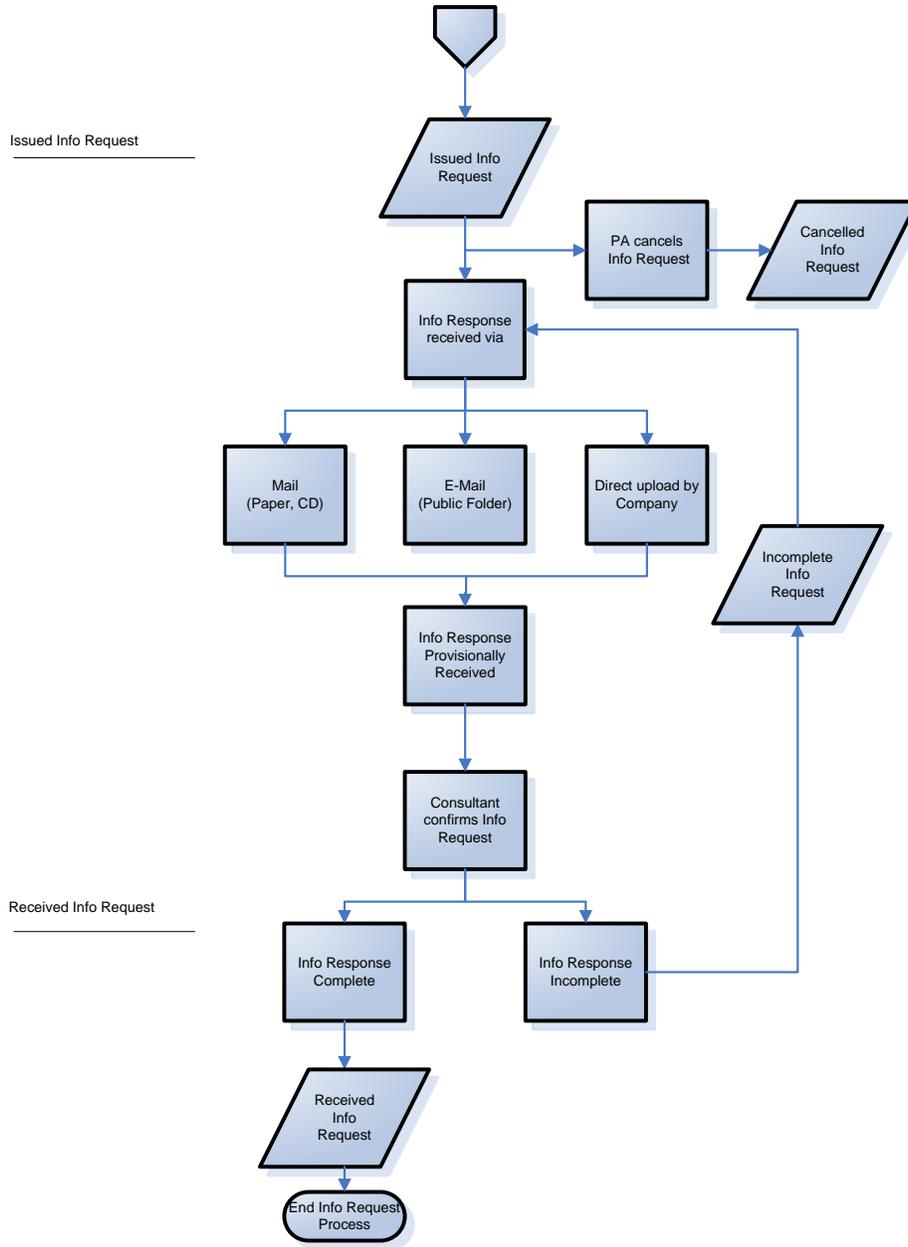


Exhibit C-30
Information Process
(continued)



Depending on who has logged on, the user will see a different *Information List* window. Security levels have determined what view the user will see when logged on. One of the differences is that the Issue button will not appear for someone who is not a *Project Administrator*.

After logging in the *Administrator* will see the *Information List* window shown in *Exhibit C-31*. The *Information List* window shows the user the information requests that are currently in PMIA for that project.

Exhibit C-31
Information Window



Signed In As **james**  Sign out Database - Pennsylvania-American Water ::

Information List | Interview List | Information Calendar | Interview Calendar | Information Report | Interview Report | Project Setup

Criteria

Req From: All Lead Consultant: All Handling Type: All

Req To: All Status: All

Issued Date From: Date To: Keyword: Search Reset

WPA: All

Information Request

Add New Entry

Req Num	Status	WPA	Description	Consultant	Issued Date	Due Date	Recv'd Date	Edit View
1	Received Complete	ExMgt	Detailed organization charts for each department within PAW and any American Water/RWE departments serving PAW departments; include city location and staffing levels for each box within organization chart	Burgess, Lee	7/6/2007	8/10/2007	8/23/2007	Edit View (3)
2	Received Complete	ExMgt	Department and division descriptions, including goals and objectives for each department	Burgess, Lee	7/6/2007	8/10/2007	9/13/2007	Edit View (1)
3	Received Complete	ExMgt	Any data and analysis of organizational effectiveness performed by PAW in last five years	Burgess, Lee	7/6/2007	8/10/2007	9/12/2007	Edit View (1)
4	Received Complete	ExMgt	Documentation pertaining to any organizational restructuring occurring during the 2003 to 2007 period	Burgess, Lee	7/6/2007	8/10/2007	8/14/2007	Edit View (3)
5	Received Complete	ExMgt	Listing of all company committees, their roles and responsibilities, frequency of meeting, membership, and sample meeting minutes	Burgess, Lee	7/6/2007	8/10/2007	9/18/2007	Edit View (1)
6	Received Complete	ExMgt	Listing of all mechanisms used by PAW to communicate with their employees	Burgess, Lee	7/6/2007	8/10/2007	7/27/2007	Edit View (1)
7	Received Complete	ExMgt	Listing and samples of regular management reports sent upward in the organization (by PAW to American Water management), including report routing and distribution lists	Burgess, Lee	7/6/2007	8/10/2007	9/17/2007	Edit View (1)
8	Received Complete	ExMgt	Any policy and procedures documentation, including listing of all departmental operational and administrative manuals	Burgess, Lee	7/6/2007	8/10/2007	9/15/2007	Edit View (1)
9	Received Complete	ExMgt	Documentation relating to strategic and corporate planning processes, including including schedules or timelines for development and approval activities, identification of key staff, approvals required, and any process flowcharts	Burgess, Lee	7/6/2007	8/10/2007	8/30/2007	Edit View (3)
10	Received Complete	ExMgt	Documentation relating to any other business unit, marketing, financial, construction, and operations planning/budgeting processes	Burgess, Lee	7/6/2007	8/10/2007	8/30/2007	Edit View (1)
11	Received	ExMgt	Documents relating to the formulation and updating of corporate, region, and	Burgess, Lee	7/6/2007	8/10/2007	9/13/2007	Edit View

The user can also type in a search criteria in the text box next to the **Keyword** and click the **Search** button. This search will perform a search on the Description, Comments and Title fields as shown in *Exhibit C-32*.



Exhibit C-32
Filter by Search

PMIA
Schumaker & Company

Signed In As **james** Sign out Database - Pennsylvania-American Water ::

Information List | Interview List | Information Calendar | Interview Calendar | Information Report | Interview Report | Project Setup

Criteria

Req From: All | Lead Consultant: All | Handling Type: All

Req To: All | Status: All

Issued | Date From: | Date To: | Keyword: business | Search | Reset

WPA: All

Information Request

Add New Entry

Req Num	Status	WPA	Description	Consultant	Issued Date	Due Date	Recv'd Date	Edit View
10	Received Complete	ExMgt	Documentation relating to any other business unit, marketing, financial, construction, and operations planning/budgeting processes	Burgess, Lee	7/6/2007	8/10/2007	8/30/2007	Edit View (1)
12	Received Complete	ExMgt	Copies of any corporate, business unit, and departmental business plans	Burgess, Lee	7/6/2007	8/10/2007	9/24/2007	Edit View (7)
159	Received Complete	CorGv	Disclosure of any ongoing business relationship between a Board member and PAW or any of its affiliates or between individual Board members	Burgess, Lee	7/6/2007	8/10/2007	8/9/2007	Edit View (1)
243	Received	OpPer	Description of business continuity planning process	Schumaker,	7/6/2007	8/10/2007	9/18/2007	Edit View

Information Request Entry

The user can add, edit and delete an entry. To add an entry, the user selects **Add New Entry**, which is located in the **Information Request** section. **Add New Entry** is located in two places in the window; just below the title **Information Request** and at the bottom of the window in the left hand corner, if the user scrolls to the bottom as shown in *Exhibit C-33*.

Exhibit C-33
Add New Entry

PMIA
Schumaker & Company

Signed In As **james** Sign out Database - Pennsylvania-American Water ::

Information List | Interview List | Information Calendar | Interview Calendar | Information Report | Interview Report | Project Setup

Criteria

Req From: All | Lead Consultant: All | Handling Type: All

Req To: All | Status: Cancelled

Issued | Date From: | Date To: | Keyword: | Search | Reset

WPA: All

Information Request

Add New Entry

Req Num	Status	WPA	Description	Consultant	Issued Date	Due Date	Recv'd Date	Edit View
479	Cancelled	OpPer	Names and titles of the members of each of the twelve Best Operating Practices working groups and the goals and objectives of each of the groups	Murphy, Martin	10/4/2007	10/18/2007		Edit

Add New Entry

After selecting **Add New Entry** the information request will appear in the add mode window as shown in *Exhibit C-34*.

**Exhibit C-34
Add Information Request**

From here the user will notice that the **Entered Date** is defaulted to the current date, if the user does not want the entered date to be the current date, then the user should change the date using the arrow buttons, or the calendar button next to the date field as shown in *Exhibit C-35*. The arrow buttons will change the date one day forward or backward.

**Exhibit C-35
Information Window - Calendar**

Upload Information Responses

Documents can be uploaded via the web interface. Click Edit in the far right of the desired response to open the edit mode, and then click Upload button to open the upload window, as shown in *Exhibit C-36*.

Exhibit C-36 Edit Window

Req Num: 1 * Entered Date: 7/5/2007

* Consultant: Burgess, Lee

* Description: Detailed organization charts for each department within PAW and any American Water/RWE departments serving PAW departments; include city location and staffing levels for each box within organization chart

* Company: PAW

* Work Plan Area: ExMgt - Executive Management & External Relations

Ref Source: Initial Request List

Dept:

Request From: Initial Request List

Status: Received Complete

Issued Date: 7/6/2007

Due Date: 8/10/2007

Comments:

Upload

View Response

Save Save + Add Cancel << Previous Next >>

In the upload window, click Browse button to browse the file that will be uploaded, and set the Received Date and Handling type. The rest of the information is optional. Click Upload button to complete the upload, as shown in *Exhibit C-37*.

Exhibit C-37 Document Upload

* Information Response: Browse...

* Received Date: 1/9/2008

* Handling Type: Consultant May Keep

InfoTitle:

Responsible Person:

Responsible Person Phone:

Responsible Person Extension:

Comments:

Upload Cancel

View Uploaded Information Responses

Once documents have been uploaded, the user will be able to view the documents. There are two ways to do it. First, click **Edit** for a request that you know has a document attached select the **View Response** button as shown in *Exhibit C-38*. The faster way of viewing documents is to click View next to Edit, as the number is an indication of how many documents are attached to the information response.

Exhibit C-38 View Response Button

PMIA Schumaker & Company Signed In As **james** Sign out Database - Pennsylvania-American Water ::

Information List | Interview List | Information Calendar | Interview Calendar | Information Report | Interview Report | Project Setup

Criteria

Req From: All | Lead Consultant: All | Handling Type: All

Req To: All | Status: All

Issued | Date From: | Date To: | Keyword: | Search | Reset | WPA: All

Information Request

Add New Entry

Req Num	Status	WPA	Description	Consultant	Issued Date	Due Date	Rec'd Date	
1	Received Complete	ExMgt	Detailed organization charts for each department within PAW and any American Water/RWE departments serving PAW departments; include city location and staffing levels for each box within organization chart	Burgess, Lee	7/6/2007	8/10/2007	8/23/2007	Edit View (3)
2	Received Complete	ExMgt	Department and division descriptions, including goals and objectives for each department	Burgess, Lee	7/6/2007	8/10/2007	9/13/2007	Edit View (1)
3	Received Complete	ExMgt	Any data and analysis of organizational effectiveness performed by PAW in last five years	Burgess, Lee	7/6/2007	8/10/2007	9/12/2007	Edit View (1)
4	Received Complete	ExMgt	Documentation pertaining to any organizational restructuring occurring during the 2003 to 2007 period	Burgess, Lee	7/6/2007	8/10/2007	8/14/2007	Edit View (3)
5	Received Complete	ExMgt	Listing of all company committees, their roles and responsibilities, frequency of meeting, membership, and sample meeting minutes	Burgess, Lee	7/6/2007	8/10/2007	9/18/2007	Edit View (1)
6	Received Complete	ExMgt	Listing of all mechanisms used by PAW to communicate with their employees	Burgess, Lee	7/6/2007	8/10/2007	7/27/2007	Edit View (1)
7	Received Complete	ExMgt	Listing and samples of regular management reports sent upward in the organization (by PAW to American Water management), including report routing and distribution lists	Burgess, Lee	7/6/2007	8/10/2007	9/17/2007	Edit View (1)

The user will be shown one of two things: If there is only one document attached the document will open automatically, else if there is more than one document attached the user will be shown the window in *Exhibit C-39* to select which document to view.

Exhibit C-39 Response Document List Window

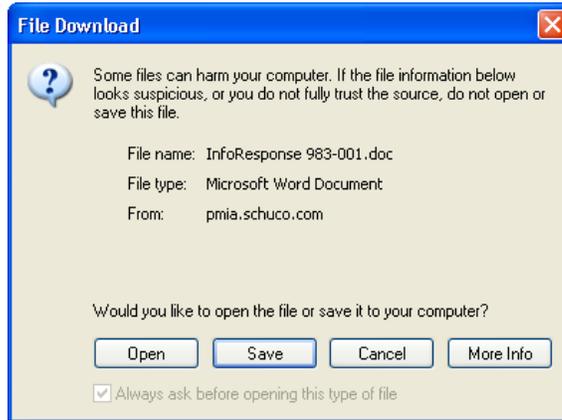
PMIA Schumaker & Company Database - Verizon NY Retail Service Quality :: Close Window

File Name	Received Date	Original File	Comments
InfoResponse 983-001.doc	11/30/2004	Copy of Test document for PMIA.doc	View
InfoResponse 983-002.doc	11/30/2004	Copy of Test document for PMIA.doc	View
InfoResponse 983-003.doc	11/30/2004	Copy of Test document for PMIA.doc	View

Cancel

The user will select **View** for the response the user wants to view. Upon receiving a document, it will be numbered and in sequential order. The numbering system determines what order the document was received. After selecting **View**, the user will be shown the window in *Exhibit C-40*. This lets the user know the File name, File type and from where. To open the document, select the **Open** button and the document will open. To disregard opening the document, select the **Cancel** button.

Exhibit C-40
File Download Window

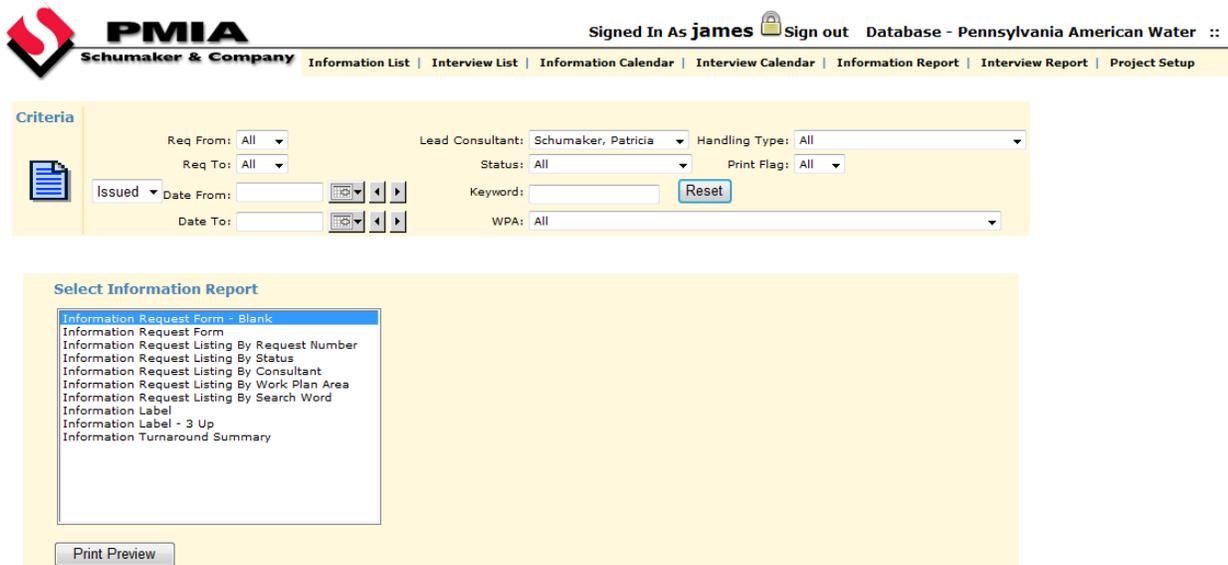


After receiving and viewing documents, the user can determine whether the request is Received Complete.

Information Request Reports

Shown in *Exhibit C-41* is the *Information Report* window.

Exhibit C-41
Information Reports Window



The filter is available for all reports. The reports can be filtered by **Search, Status, Consultant, Request From and To, Issued Date From and To, by Work Plan Area** and by **Print Flag**. Filter fields can be reset by using the **Reset** button. A list box of all of the reports is added to the screen. Shown below is a list of all of the reports available.

- ◆ Information Request Form
- ◆ Information Request Listing (Summary & Detail can be selected via radio button)
 - By Request Number
 - By Status
 - By Consultant
 - By Work Plan Area
 - By Search Word
- ◆ Information Request
 - Turnaround Report
- ◆ Information Request Labels

After the user has selected the filter criteria and selected the report, the user will select the **Print Preview** button to generate the report.

Interview Request/Summaries Business Processes

This is where the interview requests are entered and listed. The interview business processes for PMIA are shown in *Exhibit C-42* and *Exhibit C-43*.



Exhibit C-42 Interview Process

Interview Request Business Process

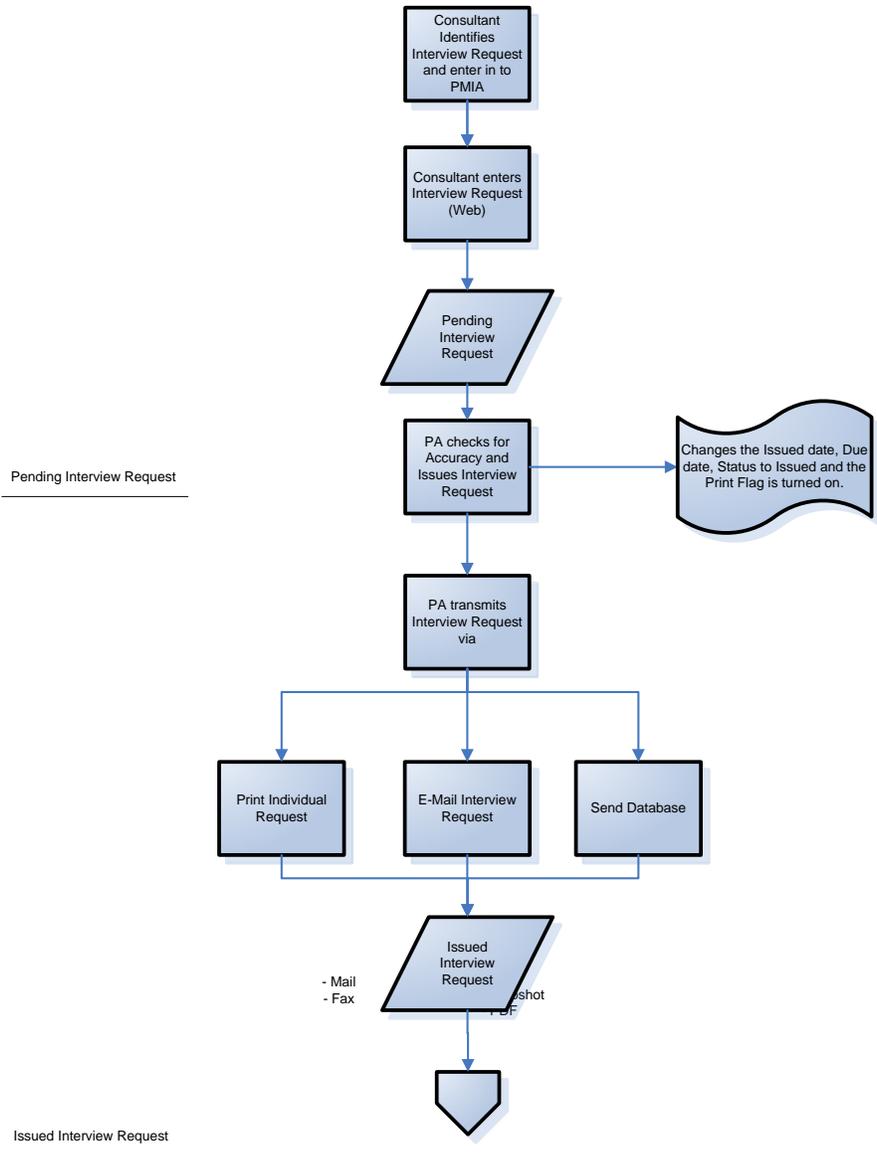
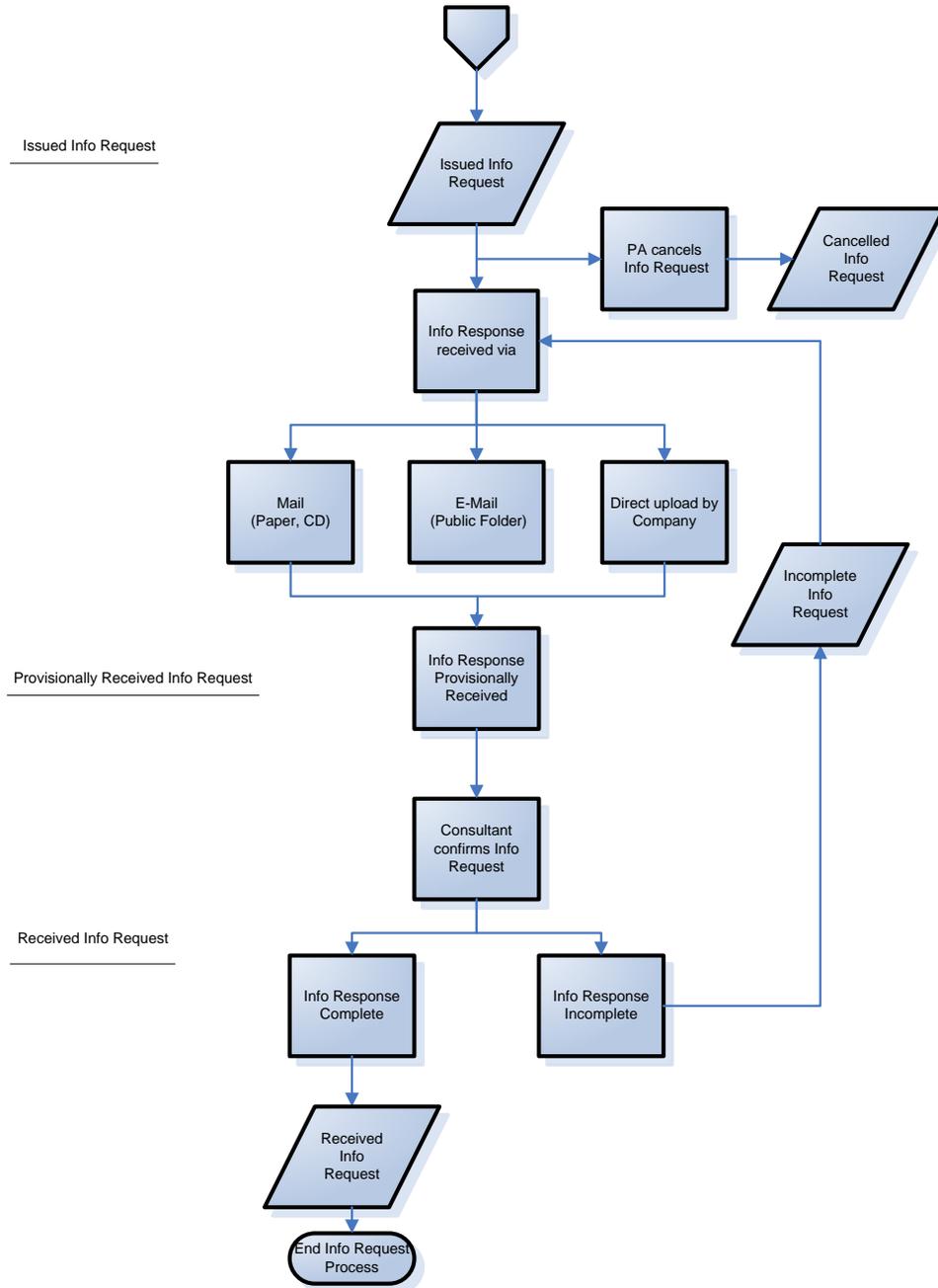


Exhibit C-43
Interview Process, cont.



When the user selects **Interview List**, the user will be shown the interview requests as shown in *Exhibit C-44*.

Exhibit C-44 Interview List



Signed In As **james**  Sign out Database - Pennsylvania American Water ::

[Information List](#) | [Interview List](#) | [Information Calendar](#) | [Interview Calendar](#) | [Information Report](#) | [Interview Report](#) | [Project Setup](#)

Criteria

Req From: All Lead Consultant: All

Req To: All Attending Consultant: All Status: All

Schd Date From: Date To: Attending Company Rep: All Keyword: Search Reset

Date To: Attending Client: All WPA: All

Interview Request

Add New Entry

Req Num	Status	Interviewee	Title	Description	Consultant	WPA	Date	Time	Type		
	Pending	Rochelle Kowalski/Bill Cox	Finance & IT	68 (Why IT expenditures going down; why 2004 so high, revenues)	Schumaker, Patricia	Fin	1/16/2008	8:00 AM	Req'd	Edit	Delete
1	Completed	Various		Kick-off Meeting in Hershey PA	Schumaker, Patricia	GEN	8/28/2007	8:00 AM	Sch'd	Edit	
2	Completed	John Young	American Water COO	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (Executive Management, Affiliate Interests, Support Services, Operational Performance)	Schumaker, Patricia	ExMgt	8/28/2007	1:30 PM	Sch'd	Edit	View (1)
3	Completed	Chuck Johnston	Business Development	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (BD)	Burgess, Lee	ExMgt	8/28/2007	2:30 PM	Sch'd	Edit	View (1)
4	Completed	Rochelle Kowalski	Regional Director, Finance	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (Financial Management and Executive Management)	Rosenkoetter, Robert	Fin	8/29/2007	8:00 AM	Sch'd	Edit	View (1)
5	Completed	Kathy Pape	President, PAW	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (Executive Management, Affiliate Interests)	Burgess, Lee	ExMgt	8/29/2007	10:00 AM	Sch'd	Edit	View (1)
6	Scheduled	Glenn Milton	VP Customer Service	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (Customer Service)	Schumaker, Dennis	CusSv	8/28/2007	1:30 PM	Sch'd	Edit	
7	Completed	Kim Legg	Regional Director, HR	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (HR, Diversity/EOC)	Laycock, Kerry	HR	8/28/2007	3:30 PM	Sch'd	Edit	View (1)

Additional Check Boxes

Aside from all the filters mentioned above, there are three check boxes that will provide additional information, as shown in Exhibit C-45.

Exhibit C-45 Interview Check Boxes



Signed In As **james**  Sign out Database - Pennsylvania American Water ::

[Information List](#) | [Interview List](#) | [Information Calendar](#) | [Interview Calendar](#) | [Information Report](#) | [Interview Report](#) | [Project Setup](#)

Criteria

Req From: All Lead Consultant: All

Req To: All Attending Consultant: All Status: All

Schd Date From: Date To: Attending Company Rep: All Keyword: Search Reset

Date To: Attending Client: All WPA: All

Interview Request

Add New Entry

Req Num	Status	Interviewee	Title	Description	Consultant	WPA	Date	Time	Type		
	Pending	Rochelle Kowalski	Finance	Conference call to discuss IR#68 (why IT expenditures going down; why 2004 so high, revenues)	Schumaker, Patricia	SS-IT	1/14/2008	8:00 AM	Req'd	Edit	Delete
	Pending	Bill Cox		Conference call to discuss IR #76/560(metrics and associated results, why taret not met)	Schumaker, Patricia	SS-IT	1/14/2008	8:00 AM	Req'd	Edit	Delete
1	Completed	Various		Kick-off Meeting in Hershey PA	Schumaker, Patricia	GEN	8/28/2007	8:00 AM	Sch'd	Edit	
2	Completed	John Young	American Water COO	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (Executive Management, Affiliate Interests, Support Services, Operational Performance)	Schumaker, Patricia	ExMgt	8/28/2007	1:30 PM	Sch'd	Edit	View (1)
3	Completed	Chuck Johnston	Business Development	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (BD)	Burgess, Lee	ExMgt	8/28/2007	2:30 PM	Sch'd	Edit	View (1)
4	Completed	Rochelle Kowalski	Regional Director, Finance	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (Financial Management and Executive Management)	Rosenkoetter, Robert	Fin	8/29/2007	8:00 AM	Sch'd	Edit	View (1)

When the box next to **Attending Consultant** is checked, a column names **Attending Consultants** appears next to **Type** column in Interview Request window, which shows all attending consultant for each request, as shown in *Exhibit C-46*.

**Exhibit C-46
Attending Consultant Check Box**

Criteria

Req From: All Lead Consultant: All
 Req To: All Attending Consultant: All Status: All
 Schd Date From: Date To: Attending Company Rep: All Keyword: Search Reset
 Attending Client: All WPA: All

Interview Request

Req Num	Status	Interviewee	Title	Description	Consultant	WPA	Date	Time	Type	Attending Consultants	Edit	Delete
	Pending	Rochelle Kowalski	Finance	Conference call to discuss IR#68 (why IT expenditures going down; why 2004 so high, revenues)	Schumaker, Patricia	SS-IT	1/14/2008	8:00 AM	Req'd	Schumaker, Patricia;	Edit	Delete
	Pending	Bill Cox		Conference call to discuss IR #76/560(metrics and associated results, why taretis not met)	Schumaker, Patricia	SS-IT	1/14/2008	8:00 AM	Req'd	Schumaker, Patricia;	Edit	Delete
1	Completed	Various		Kick-off Meeting in Hershey PA	Schumaker, Patricia	GEN	8/28/2007	8:00 AM	Sch'd	Burgess, Lee; Laycock, Kerry; Murphy, Martin; Rosenkoetter, Robert; Schumaker, Dennis; Schumaker, Patricia;	Edit	
2	Completed	John Young	American Water COO	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (Executive Management, Affiliate Interests, Support Services, Operational Performance)	Schumaker, Patricia	ExMgt	8/28/2007	1:30 PM	Sch'd	Burgess, Lee; Murphy, Martin; Rosenkoetter,	Edit	View (1)

When the box next to **Attending Company Rep** is checked, a column named **Attending Company Reps** appears next to **Type** column in Interview Request window, which shows all attending company reps for each request, as shown in *Exhibit C-47*.

**Exhibit C-47
Attending Company Reps Column**

Criteria

Req From: All Lead Consultant: All
 Req To: All Attending Consultant: All Status: All
 Schd Date From: Date To: Attending Company Rep: All Keyword: Search Reset
 Attending Client: All WPA: All

Interview Request

Req Num	Status	Interviewee	Title	Description	Consultant	WPA	Date	Time	Type	Attending Company Reps	Edit	Delete
	Pending	Rochelle Kowalski	Finance	Conference call to discuss IR#68 (why IT expenditures going down; why 2004 so high, revenues)	Schumaker, Patricia	SS-IT	1/14/2008	8:00 AM	Req'd		Edit	Delete
	Pending	Bill Cox		Conference call to discuss IR #76/560(metrics and associated results, why taretis not met)	Schumaker, Patricia	SS-IT	1/14/2008	8:00 AM	Req'd		Edit	Delete
1	Completed	Various		Kick-off Meeting in Hershey PA	Schumaker, Patricia	GEN	8/28/2007	8:00 AM	Sch'd	Tschachler, Louis;	Edit	
2	Completed	John Young	American Water COO	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (Executive Management, Affiliate Interests, Support Services, Operational Performance)	Schumaker, Patricia	ExMgt	8/28/2007	1:30 PM	Sch'd		Edit	View (1)

When the box next to **Attending Client** is checked, a column named **Attending Clients** appears next to **Type** column in Interview Request window, which shows all attending clients for each request, as shown in *Exhibit C-48*.

Exhibit C-48 Attending Clients Column

Signed In As **james** Sign out Database - Pennsylvania American Water ::

Information List | Interview List | Information Calendar | Interview Calendar | Information Report | Interview Report | Project Setup

Criteria

Req From: All | Lead Consultant: All | Attending Consultant: All | Status: All

Schd | Date From: | Date To: | Attending Company Rep: All | Keyword: | Search | Reset

Attending Client: All

WPA: All

Interview Request

Add New Entry

Req Num	Status	Interviewee	Title	Description	Consultant	WPA	Date	Time	Type	Attending Clients	Edit	Delete
	Pending	Rochelle Kowalski	Finance	Conference call to discuss IR#68 (why IT expenditures going down; why 2004 so high, revenues)	Schumaker, Patricia	SS-IT	1/14/2008	8:00 AM	Req'd			
	Pending	Bill Cox		Conference call to discuss IR #76/560(metrics and associated results, why taret's not met)	Schumaker, Patricia	SS-IT	1/14/2008	8:00 AM	Req'd			
1	Completed	Various		Kick-off Meeting in Hershey PA	Schumaker, Patricia	GEN	8/28/2007	8:00 AM	Sch'd	Burger, Lori; Clista, John; Hosler, Dennis; Irani, Porus; Lesney, Carl; Palewicz, Mike;	Edit	

A consultant can select any number of check boxes or all if desired. Shows all boxes checked.

Exhibit C-49 Selection of Check Boxes

Signed In As **james** Sign out Database - Pennsylvania American Water ::

Information List | Interview List | Information Calendar | Interview Calendar | Information Report | Interview Report | Project Setup

Criteria

Req From: All | Lead Consultant: All | Attending Consultant: All | Status: All

Schd | Date From: | Date To: | Attending Company Rep: All | Keyword: | Search | Reset

Attending Client: All

WPA: All

Interview Request

Add New Entry

Req Num	Status	Interviewee	Title	Description	Consultant	WPA	Date	Time	Type	Attending Consultants	Attending Company Reps	Attending Clients	Edit	Delete
	Pending	Rochelle Kowalski	Finance	Conference call to discuss IR#68 (why IT expenditures going down; why 2004 so high, revenues)	Schumaker, Patricia	SS-IT	1/14/2008	8:00 AM	Req'd	Schumaker, Patricia;			Edit	Delete
	Pending	Bill Cox		Conference call to discuss IR #76/560 (metrics and associated results, why taret's not met)	Schumaker, Patricia	SS-IT	1/14/2008	8:00 AM	Req'd	Schumaker, Patricia;			Edit	Delete
1	Completed	Various		Kick-off Meeting in Hershey PA	Schumaker, Patricia	GEN	8/28/2007	8:00 AM	Sch'd	Burgess, Lee; Laycock, Kerry; Murphy, Martin; Rosenkoetter, Robert; Schumaker,	Tschachler, Louis;	Burger, Lori; Clista, John; Hosler, Dennis; Irani, Porus;	Edit	

Interview Request Entry

The user can add, edit and delete an entry. To add an entry, the user selects Add New Entry, which is located in the Interview Request section. Add New Entry is located in two places in the window; just below the title Interview Request and at the bottom of the window in the left hand corner, if the user scrolls to the bottom. After selecting Add New Entry the interview request will appear in the add window as shown in *Exhibit C-50*.

Exhibit C-50 Add Interview Request



Signed In As **james** Sign out Database - Pennsylvania American Water ::

Req Num:		* Entered Date:	1/10/2008
* Interviewee:	<input type="text"/>	* Consultant:	--Select Item--
Title:	<input type="text"/>	* Company:	PAW
* Work Plan Area:	GEN - General Materials	Dept:	<input type="text"/>
* Req. Date:	9/4/2007	* Req. Time:	8 AM 00
Alt. Date:	<input type="text"/>	Alt. Time:	-- 00
Act. Date:	<input type="text"/>	Act. Time:	-- 00
* Est. Hrs:	2		
<input type="button" value="Client Reps"/>			
<input type="button" value="Company Reps"/>			
<input type="button" value="Consultants"/>			
* Description:	<input type="text"/>	Status:	Pending
Issued Date:		Due Date:	
Comments:	<input type="text"/>	Location:	<input type="text"/>
Phone:	<input type="text"/>	Ext:	<input type="text"/>
Confirm Date:		Summary Date:	
<input type="checkbox"/> Draft <input type="checkbox"/> Final			
<input type="button" value="Save"/> <input type="button" value="Save & Add"/> <input type="button" value="Cancel"/> <input type="button" value=" << Previous"/> <input type="button" value=" Next >>"/>			

After selecting the **Save** button, the user will be taken back to the edit window where the user will not see the **Confirm Interview Request** button as shown in *Exhibit C-51* and the status will change to Scheduled. The user must select the **Save** button on the Edit window in order for the request to be confirmed.

Exhibit C-51 Scheduled Interview Request



Signed In As **james** Sign out Database - Pennsylvania

<p>Req Num: 58</p> <p>* Interviewee: Unknown</p> <p>Title: _____</p> <p>* Work Plan Area: DEEO - Diversity & EEO</p> <p>* Req. Date: 9/12/2007</p> <p>Alt. Date: 9/14/2007</p> <p>Act. Date: 9/12/2007</p> <p>* Est. Hrs: 2</p> <p><input type="button" value="Client Reps"/></p> <p><input type="button" value="Company Reps"/></p> <p><input type="button" value="Consultants"/></p> <p>* Description: Person responsible for developing PAWC EEOC-1 and affirmative action reports and any other diversity statistics</p> <p>Issued Date: 9/5/2007</p> <p>Comments: Kerry to discuss with Susan Caruso, then decide if this interview is needed</p> <p>Phone: _____</p> <p>Confirm Date: <input type="checkbox"/> Draft <input type="checkbox"/> Final</p>	<p>* Entered Date: 9/3/2007</p> <p>* Consultant: Schumaker, Patricia</p> <p>* Company: PAW</p> <p>Dept: _____</p> <p>* Req. Time: 8 AM 00</p> <p>Alt. Time: -- 00</p> <p>Act. Time: 8 AM 00</p> <p>Status: Scheduled</p> <p>Due Date: 9/12/2007</p> <p>Location: Hershey</p> <p>Ext: _____</p> <p>Summary Date: _____</p> <p><input type="button" value="Upload Interview Summary"/></p> <p><input type="button" value="Cancel Request"/></p>
<p><input type="button" value="Save"/> <input type="button" value="Save & Add"/> <input type="button" value="Cancel"/> <input type="button" value="Previous"/> <input type="button" value="Next"/></p>	

View Interview Summary

Interviews are conducted by consultants and then need to be logged and recorded for future reference.

To view the interview summary, if the user is already in the Edit window for a request, select the **View Interview Summary** button. Otherwise, if the user is not already on the Edit window, select **Edit** next to the interview request corresponding to the interview summary. Once on the Edit window, the user will see the **View Interview Summary** button as shown in *Exhibit C-52*. The **View Interview Summary** button will only appear if there are summaries attached to the interview request.

Exhibit C-52 View Interview Summary Button

Signed In As **james** Sign out Database - Pennsylvania American Water ::

Req Num: 7
 * Interviewee: Kim Legg
 Title: Regional Director, HR
 * Work Plan Area: HR - Human Resources
 * Req. Date: 8/28/2007
 Alt. Date:
 Act. Date: 8/28/2007
 * Est. Hrs: 2
 Client Reps: Palewicz, Mike
 Company Reps:
 Consultants: Laycock, Kerry; Schumaker, Patricia; Stopar, Gail
 * Description: Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (HR,
 Issued Date: 8/9/2007
 Comments: Also attending was Carole Daszni, Interim American Water HR Director
 Phone:
 Confirm Date: Draft Final
 Entered Date: 8/6/2007
 * Consultant: Laycock, Kerry
 * Company: PAW
 Dept:
 * Req. Time: 3 PM 30
 Alt. Time: -- 00
 Act. Time: 3 PM 30
 Status: Completed
 Due Date: 8/16/2007
 Location: Hershey
 Ext:
 Summary Date: 10/3/2007
 Upload Interview Summary
View Interview Summary
 Save Save + Add Cancel << Previous Next >>

Alternatively, Interview Summary can be viewed simply clicking **View** next to **Edit**. The number indicates the number of interview summaries. As shown in *Exhibit C-53*. The Next and Previous buttons are very self explanatory, they allow consultants to view next or previous request without exiting the edit mode.

Exhibit C-53 Interview Summary View

Signed In As **james** Sign out Database - Pennsylvania American Water ::

Information List | Interview List | Information Calendar | Interview Calendar | Information Report | Interview Report | Project Setup

Criteria
 Req From: All
 Req To: All
 Lead Consultant: All
 Attending Consultant: All
 Status: Completed
 Schd Date From: Date To: Attending Company Rep: All
 Attending Client: All
 Keyword: WPA: All
 Search Reset

Interview Request
 Add New Entry

Req Num	Status	Interviewee	Title	Description	Consultant	WPA	Date	Time	Type	
1	Completed	Various		Kick-off Meeting in Hershey PA	Schumaker, Patricia	GEN	8/28/2007	8:00 AM	Sch'd	Edit
2	Completed	John Young	American Water COO	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (Executive Management, Affiliate Interests, Support Services, Operational Performance)	Schumaker, Patricia	ExMgt	8/28/2007	1:30 PM	Sch'd	Edit View (1)
3	Completed	Chuck Johnston	Business Development	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (BD)	Burgess, Lee	ExMgt	8/28/2007	2:30 PM	Sch'd	Edit View (1)
4	Completed	Rochelle Kowalski	Regional Director, Finance	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (Financial Management and Executive Management)	Rosenkoetter, Robert	Fin	8/29/2007	8:00 AM	Sch'd	Edit View (1)
5	Completed	Kathy Pape	President, PAW	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (Executive Management, Affiliate Interests)	Burgess, Lee	ExMgt	8/29/2007	10:00 AM	Sch'd	Edit View (1)
7	Completed	Kim Legg	Regional Director, HR	Orientation interview describing organization, major processes and systems, key accomplishments, and upcoming initiatives (HR, Diversity/EEO)	Laycock, Kerry	HR	8/28/2007	3:30 PM	Sch'd	Edit View (1)
8	Completed	Dan Hufton	Regional	Orientation interview describing organization, major processes and systems, key	Schumaker,	WaOps	8/28/2007	3:30	Sch'd	Edit View

If there are more than one interview summaries attached, the user will see the window in *Exhibit C-54*. If there is only one interview summary attached, then the interview summary will open automatically on the screen. Upon uploading a document

the summary will be given a numbering system. The standard will be to include **InterSummary** then the request number, a dash, and the sequence number. The numbering system determines what order the document was uploaded.

Exhibit C-54 View Interview Summary List



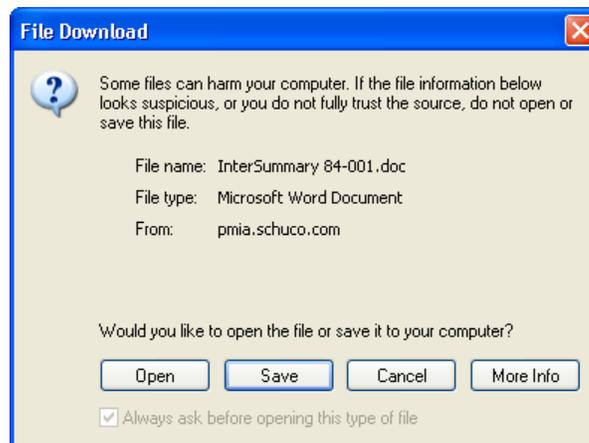
Database - Verizon NY Retail Service Quality :: Close Window

File Name	Summary Date	Comments
InterSummary 84-001.doc	11/19/2004	View
InterSummary 84-002.doc	11/19/2004	View

Cancel

To view a summary, select **View** next to the response to be viewed. After selecting **View**, the user will be shown the window in *Exhibit C-55*. This lets the user know the file name, file type, and from where.

Exhibit C-55 File Download Window



Interview Request Calendar

The Interview Request Calendar shows the scheduled information request in the corresponding date for the current month by default. Consultants can also view previous or next month by clicking the months shown on top corners of the calendar, as shown in *Exhibit C-56*. Consultants can open the edit mode of any information request by clicking the corresponding request in the calendar.

Exhibit C-56 Interview Request Calendar



Signed In As **james** Sign out Database - Pennsylvania American Water ::

[Information List](#) |
 [Interview List](#) |
 [Information Calendar](#) |
 [Interview Calendar](#) |
 [Information Report](#) |
 [Interview Report](#) |
 [Project Setup](#)

Criteria

Req From: All Lead Consultant: All
 Req To: All Attending Consultant: All Status: All
 Issued Date From: Date To: Attending Company Rep: All Keyword: Search Reset
 Date To: Attending Client: All WPA: All

<< December 2007		January 2008					February 2008 >>
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
		1	2	3	4	5	
6	7	8	9	10	11	12	
	9:00 AM/161 Bill Komianos 10:00 AM/158 James Li 11:00 AM/159 Joe Kuchmek 2:00 PM/172 Jim Lesney 3:00 PM/160 Mike Shanko		10:00 AM/169 Emily Ashworth/Ellen Wolf				
13	14	15	16	17	18	19	
20	21	22	23	24	25	26	
			9:00 AM/162 Deb Schmid/Donna Trickle				

Interview Request Reports

The *Interview Request Listing* reports allows the *Project Manager* to see how many interview requests there are, how many have been issued, how many have been received, how many have been confirmed or not confirmed, and how many are still pending. It gives the user a detail of the interview. It shows the consultants attending the interview, the appointment date and time, the request number, the meeting place, the client attending, description of the interview, status of the interview and any special instructions. The consultants and *Project Manager* use these reports to follow-up on the project.

Shown in *Exhibit C-57* is the Interview Report window.

Exhibit C-57 Interview Reports Window

The filter is available for all reports. The user can filter by **Search, Status, Consultant, Print Flag, Attending Consultant, Request From and To, Issued Date From and To**, and by **Work Plan Area**. The user can reset the filter fields by using the **Reset** button.

A list box of all of the reports is added to the screen. Shown below is a list of all of the reports available.

- ◆ Interview Request Form
- ◆ Interview Request Listing (Summary & Detail can be selected via radio button)
 - By Request Number
 - By Status
 - By Consultant
 - By Work Plan Area
 - By Search Word
- ◆ Interview Request
 - Turnaround Report
- ◆ Interview Request Labels

They saw the amount of administrative time that the system saved, time that was then spent performing the actual investigative and analytical work.

Time and Expense Information Reporting System (TEIRS)

For professional services firms, tracking and billing for time are essential parts of doing business—and among the most cumbersome. Schumaker & Company developed the *Time and Expense Information Reporting System (TEIRS)* database to collect information regarding time spent and expenses incurred by staff members and outside consultants on assignments.

Time and expenses are tracked for several reasons:

- ◆ Project management
 - The system tracks hours, fees, and expenses, which are used by project managers to manage our projects.
 - The system also provide extensive reporting, including project management reports—actual to budget, invoiced to actual, etc.— as a means to provide high-quality project management and control of costs
 - Professional fees and expenses associated with a project are automatically generated for client billing.
- ◆ Firm management
 - Firm performance can be measured through some of the staff utilization and other reports available from the system.
 - The system provides a database of information for use in bidding other assignments.
- ◆ Employee reporting
 - The system tracks paid time off.
 - The system automates employee expense submission and reimbursement.
 - The system provides various reports for individuals to measure their own performance.

With TEIRS, one can easily monitor the total time and expenses spent by assignment, work area, task or by personnel. The application has been designed to run on a client/server environment and has been web enabled. It opens in the Time Entry Window as shown in *Exhibit C-58*. Assignments can be invoiced by fixed fee, time and materials, or other variations.



Exhibit C-58 Initial Time and Expense Entry Form

Time and Expense Entries

Your time and expense entries are listed here in three groups: Time, Travel Expenses, and Other Expenses.

Please use the Filter Results panel to change the number and type of results you would like to see.

[View these entries on Timesheet - Summary](#)

[View these entries on Timesheet - Detail](#)

[Select a report...](#)

Filter Results

Date From:

Date To:

Staff:

Assignment:

Rate and Amount:

Billable: Posted:

Time

Date	Assign #	Client	WP Code	Task Code	Hours	Cost Rate	Cost Amount	Billable	Posted	Invoice Visible	Description	
2/3/2004	10050024A	NYDPS	PMA		4.00	\$196.00	\$784.00	Yes	Yes	Yes	Conference calls with John Coleman, the Union etc.	Edit Delete
2/3/2004	10030019A	PAPUC	TGC		3.00	\$120.00	\$360.00	Yes	Yes	Yes	Conference calls and review of comments	Edit Delete
2/3/2004	090800002	ADMIN	Admin		2.00	\$120.00	\$240.00	No	Yes	No	various	Edit Delete
2/3/2004	090000002	MARKET&BD	Account		1.00	\$120.00	\$120.00	No	Yes	No	Marketing meeting etc.	Edit Delete
2/4/2004	10050024A	NYDPS	PMA		2.00	\$196.00	\$392.00	Yes	Yes	Yes	Various tasks	Edit Delete
2/4/2004	10030019A	PAPUC	TGC		5.00	\$120.00	\$600.00	Yes	Yes	Yes	Responding to comments	Edit Delete
2/4/2004	090200002	SYSDEV	TEIRS		2.00	\$120.00	\$240.00	No	Yes	No	meeting and stuff	Edit Delete
Totals					19.00		\$2,736.00					

Travel Expenses

Date	Assign #	Client	WP Code	Type	Quantity	Cost Rate	Cost Amt.	Billable	Posted	Reimbursable	Description	
2/3/2004	090800002	ADMIN	Admin	Dinner/Actual	1.00	\$0.00	\$63.10	No	Yes	Yes	DJS & PHS	Edit Delete
2/4/2004	090800002	ADMIN	Admin	Dinner/Actual	1.00	\$0.00	\$92.38	No	Yes	Yes	DJS & PHS	Edit Delete
Totals					2.00		\$155.48					

Other Expenses

No items found

The Schumaker & Company *Time and Expense Information Reporting System* puts all time and expense information in a single application—a system that yields comprehensive management information and gives insight into employee productivity, profit margins, project schedules, and resource management.

Schumaker & Company's Data Center Choice

Schumaker & Company's applications need to run on a secure platform that can handle various users. This requires significant hardware performance and network bandwidth. It is of the utmost importance that we and our clients do not experience down time. Schumaker & Company not only needs a highly-secure and industrial data center to insure high-availability, but accessibility and flexibility enough to meet our needs for immediate access to our technology and quick scale convenience to our business volume are paramount. With these needs in mind, Schumaker & Company maintains all work papers and client sensitive material at a secure data center located near our Ann Arbor, Michigan headquarters and managed by Online Tech, Inc. (Online Tech).

About Online Tech

As Online Tech is Michigan's largest network of managed data centers, their infrastructure provides a secure, reliable data center with high availability colocation service and an experienced on-site team that is readily accessible to our staff, which makes Online Tech the best choice for us to offer our client applications. Online Tech offers Schumaker & Company a full

range of colocation, dedicated server hosting and managed servers for our needs around the world. We, along with other industry leaders, trust Online Tech to ensure their servers are always on, always online, and always safe.

Incorporated in 1994 as one of Michigan's first Internet service providers (ISP) and then acquired by new owners in July, 2003, significant investments were made in data center and network infrastructure to make Online Tech Michigan's largest managed data center operator. Since then, Online Tech's management team has deftly positioned the company to win in colocation, dedicated server hosting and the managed data center markets. Online Tech's management team has decades of experience starting and managing successful high-tech service businesses from start-ups to Fortune 500 global providers. Their industrial class data centers and network provide secure, scalable and reliable infrastructure required for demanding high availability hosting and industrial-strength disaster recovery. As an example, Online Tech provided continuous service during the power black-out of 2003, even deploying new customers during the outage.

Online Tech Avis Farms Center

Online Tech's corporate office and main data center are housed in a new office building on Avis Farms Drive in Ann Arbor, Michigan. The data center has six separate rooms: primary computer, battery and power; network infrastructure; network operations center (NOC) technician offices, customer work room with kernel-based virtual machine (KVM) access; and a spare parts closet, helping segment risk and damage.

Exhibit C-59
Online Tech Avis Farms Center Office



The Avis Farms data center offers a premier location for production or disaster recovery server hosting. The Avis Farms data center is located in Ann Arbor, Michigan, with close proximity to major highways and the University of Michigan. The facility includes 7,500 square feet of 12" raised floor data center area, high availability fiber Internet connectivity, and high availability power and cooling systems. The Avis Farms data center also offers geographic separation from Online Tech's Exchange Drive data center, providing diversified utility and network feeds to fulfill objectives of disaster recovery projects.

Online Tech operates under SOC 1, 2, and 3 and HIPAA compliance standards. Online Tech is operating under the Service Organization Control (SOC) framework, which consists of SOC 1, SOC 2, and SOC 3. SOC 1 is geared toward



reporting on internal controls relevant to financial reporting, SOC 2 and SOC 3 reports are designed for reporting on controls outside that of financial reporting. A SOC 1 report utilize Statements on Standards for Attestation Engagements No. 16 (SSAE-16), which is the successor standard to Statement on Auditing Standards No. 70 (SAS-70), while SOC 2 and SOC 3 reports utilize Attestation Standards (AT) Section 101. Previously Online Tech was SAS-70 compliant, but in 2011 it became SOC compliant with the completion of its audits in these areas. SOC 2 and SOC 3 audits are even more stringent audits that raise the bar for managed data center operators. Online Tech is also the first managed data center operator in Michigan to achieve 100% Health Insurance Portability and Accountability Act (HIPAA) of 1996 compliance through an audit that tested compliance in 54 HIPAA citations, including 136 audited components. Such audits are also very important to public companies in the US that are required to comply Sarbanes-Oxley (SOX) Act, HIPAA, Payment Card Industry (PCI) Data Security Standard (DSS), and other guidelines.

Exhibit C-60
Detailed Technical Specifications

<i>Facility</i>	<ul style="list-style-type: none"> ◆ Single story, concrete, steel, cinder block, and aluminum building, with a dryvit exterior; in close proximity of road, air, and rail transportation ◆ Built in 1996, the building is 10,500 sq. ft., with 7,500 square feet of 12” raised floor and 10’ finished ceiling ◆ All critical equipment is N+1 or in many cases fully redundant and spare parts maintained or a maintenance contract with a maximum four hour response time
<i>Security</i>	<ul style="list-style-type: none"> ◆ All critical equipment is N+1 with full redundancy across core network and security systems ◆ Dry pipe fire suppression system with a double interlock pre-action design ◆ Power equipment, network infrastructure, and network operations equipment are segregated in locked rooms or cages with no customer access ◆ Multiple levels of physical security with two-factor authentication to gain floor access ◆ Digital video surveillance with 24x7 recording activity
<i>Power</i>	<ul style="list-style-type: none"> ◆ Natural gas and diesel generators provide 850 KVA of emergency power ◆ Liebert UPS systems provide 375 KVA of conditioned power ◆ High availability power runs offer diverse power paths to each server
<i>Network Infrastructure</i>	<ul style="list-style-type: none"> ◆ Multiple gigabit fiber from different providers supply network access to the Ann Arbor data center ◆ 100% redundant gigabit network provides capacity on-demand ◆ Private gigabit connection for data replication to Online Tech’s mid-Michigan data center 53 miles away. ◆ High availability dual Cisco-powered network provides redundant network connections to all servers.
<i>Cooling Capacity</i>	<ul style="list-style-type: none"> ◆ 120 tons of cooling capacity with full N+1 redundancy ◆ Heat mitigation configuration includes a 12” raised floor, 10’ finished ceiling, and hot/cold aisle configuration
<i>Hands On Assistance</i>	<ul style="list-style-type: none"> ◆ Technical resources are available onsite for periodic or full-time outsourced assistance