

Schumaker & Company

Proposal to Perform
an Independent Audit
of
Consolidated Edison Company of New York, Inc.
For
New York Public Service Commission

November 17, 2006



I. Introduction

The Public Service Commission of the State of New York has directed that an independent third-party consultant be retained to conduct an audit of Consolidated Edison Company of New York, Inc.'s (ConEd or the Company) performance in response to several outage emergencies and the Company's planning and performance for restoration of service.

During the period January to September 2006, there were four instances in which large numbers of ConEd's customers, primarily in Westchester and Long Island City (Queens), experienced major power outages¹ that lasted anywhere from five to nine days each before service was fully restored. There was significant customer and governmental dissatisfaction with the company's responses to these outages, and numerous complaints were received by the Department of Public Service regarding the utility's slow responses, delayed restoration of power, poor communications, inaccurate recorded customer service messages, and a lack of information provided to customers. For example, on July 17, 2006, disturbances on the company's distribution feeders during an extended period of high temperatures resulted in extensive outages for customers served by its networks and an extended time to restore service.

Schumaker & Company also understands that the Commission has ordered a Staff investigation into the Long Island City electric network outage (Case 06-E-0894) Electric Power Outages in Consolidated Edison Company of New York, Inc.'s Long Island City Electric Network, Order Instituting Proceeding and Directing Staff Investigation (issued July 26, 2006). Schumaker & Company also understands that Staff has conducted a review of the January 2006 outage and is currently conducting a review of the July and September outages. We will take into account the information, findings, and recommendations resulting from Case 06-E-0894 and other internal or external reviews/investigations of Company outages as a part of our review.

A. Understanding of the Issues

Schumaker & Company has assembled a team of consultants from two separate organizations to perform this important investigation for the New York Public Service Commission (NYPSC or Commission). Schumaker & Company is a management consulting and professional services firm committed to assisting state regulatory commissions in assessing the performance of electric, gas, water, and telecommunications companies. Since our inception in 1986, we have been assisting state commissions in their oversight of electric, gas, water, and telecommunications companies within their various jurisdictions. Several of the project team members who are proposed for this assignment will just be completing an assignment for the Pennsylvania Public Utility Commission performing a management and operations review of PECO Energy in Philadelphia. In fact, emergency preparedness and business continuity planning were specific areas of the review that were included in the scope of our

¹ The Westchester outages were January 18-23, July 18-22, and September 2-8, 2006. The Long Island City outage was July 17-25, 2006.

review on this project. This experience and other experience give us a strong background of experience upon which to draw for putting forth “best practices.”

Emergency Preparedness Partnerships has teamed with Schumaker & Company for this assignment. Emergency Preparedness Partnerships (EPP) has been helping utility companies prepare for emergencies through plan development, review, and audit; training and plan implementation; drills and exercises; standard operating procedure development; and vulnerability assessments and physical security assessments. Schumaker & Company project team member experience combined with Emergency Preparedness Partnerships project team members makes our project team uniquely qualified for this assignment.

Schumaker & Company will be the prime contractors for this assignment and Emergency Preparedness Partnerships will be a subcontractor to Schumaker & Company. Schumaker & Company’s proposed Project Manager, Mr. Dennis Schumaker, has extensive experience managing projects of this size and nature for state regulatory commissions of many different jurisdictions. Two years ago, Mr. Schumaker was the Project Manager for the Doherty & Company, Inc. Service Quality Review of Verizon NY at the request of the New York Public Service Commission. In addition, several other consultants proposed for this assignment, Martin Skeer and Martin Murphy, also participated on that assignment as Lead Consultants or Senior Consultants. This one-year assignment involved 11 consultants (of which Schumaker & Company provided four) and required over 6,900 hours for a total project cost of approximately \$1,600,000. We bring to this ConEd operations and performance review extensive experience in performing investigations for state regulatory commissions including New York.

II. Scope and Objectives

This chapter presents Schumaker & Company's understanding of the scope and objectives of the forthcoming review of Consolidated Edison Company of New York's Electric Emergency Outage Program.

A. Objectives

As Schumaker & Company understands the situation, the New York Public Service Commission (NYPSC or Commission) issued an Order² on September 8, 2006 initiating proceedings to investigate system-wide operations, practices, and procedures as they relate to Consolidated Edison Company's (ConEd) emergency planning, response to outages, and restoration of service. After concerns were raised by customer complaints regarding ConEd's performance related to electric emergency outages in January, July, and September of 2006, the NYPSC detailed a request for an independent audit. This proposal addresses that audit's overall objectives to review the adequacy of:

- ◆ ConEd's planning efforts for electric emergency outages, including a review of the policies and procedures that form the framework for the company's response to electric emergency outages.
 - ◆ ConEd's ability to mobilize adequate resources, establish critical priorities, effectively execute plans with the agility needed to quickly make adjustments in response to changing circumstances and the effectiveness of the company's communications with customers, other responders, stakeholders, etc., including a detailed assessment of restoration activities and ConEd's ability to function effectively within the Incident Command System or similar framework and protocols.
 - ◆ ConEd's electric emergency outage planning and restoration activities compared with industry standard "best practices."
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B. Scope

The scope of work will review ConEd's service quality efforts in relation to the three objectives cited in the request for proposal (RFP): Planning/Preparedness, Performance/Effectiveness, and Best Practices.

Planning/Preparedness

Audit responsibilities which support the Planning/Preparedness overall objective include:

^{2/} Case 06-M-1078, Proceeding on motion of the Commission to Audit the Performance of Consolidated Edison Company of New York, Inc. in Response to Outage Emergencies, Order Instituting Proceeding and Directing Audit, issued September 8, 2006, Page 2

1. Determining the adequacy of ConEd's overall electric emergency preparation and response planning process and their Emergency Response Plan, including any actions the Company takes in anticipation of an event that may result in an electric emergency outage and what steps can be taken to reduce the impact of that outage. Recent changes in the planning and response process will be identified and assessed.
2. Assessing ConEd's internal structure of managing service interruptions and managing overall resources, including a review of reporting relationships established and the roles and responsibilities of organizations and personnel involved in electric emergency outage planning, response, and restoration.
3. Determining the adequacy of ConEd's current plans to better utilize outside plant workforce; including plans for increased management focus on productivity, additional training, and the use of global positioning equipment and other productivity enhancement tools.
4. Evaluating ConEd's planning criteria and operating policies, plan activation thresholds, as well as the personnel and equipment available for response to large-scale outage emergencies and ConEd's planning efforts associated with deploying and managing these resources in an optimal manner. Management and response to multiple and simultaneous large-scale outages occurring in different operating areas will also be reviewed.
5. Assessing load reduction plans/policies incorporated in ConEd's planning models and/or policies and procedures.
6. Identifying the effectiveness of the systems and procedures ConEd employs for determining the extent of damage incurred, number of customer outages, and developing service restoration estimates, taking into consideration internal communication processes and the use of data information systems for restoration planning purposes and the potential availability of information from other external sources as to individual retail customers impacted by an outage. Procedures for obtaining, deploying, and managing assistance from other utilities, equipment providers, and contractors will also be reviewed.
7. Ascertaining whether or not ConEd's plans and procedures provide for effective communication and outreach efforts on a regular basis. Policies and procedures for providing services and accurate information to customers, local officials, state agencies, and the general public throughout an electric emergency outage event will be reviewed.

Performance/Effectiveness

Audit responsibilities which support the Performance/Effectiveness overall objective include:

1. Reviewing ConEd's actual electric emergency outage performance, including execution of its Emergency Response Plan. Historical performance during outage restoration activity will be

included. Any internal assessments (“lessons learned”)³ and New York State Department of Public Service (NYSDPS) Staff reviews⁴ of ConEd outages from 1999 through 2006 will be examined to determine whether the recommendations from these assessments were implemented.

2. Evaluating the optimal effectiveness of ConEd to deploy and manage personnel and equipment and in communicating information internally. The appropriateness and follow through of policies and procedures activated will be reviewed. Data collection systems used for determining the extent of outages, including the number of customers affected and the development of an accurate estimate of the time for service restoration, and interruption reporting systems, including customer-based interruption reporting systems will also be reviewed for data collection processes and accuracy.
3. Assessing the incorporation of ConEd’s network supply/load reduction actions taken to meet emergency situations and the effectiveness of ConEd procedures, management, and deployment of resources when obtaining assistance from other utilities and contractors.
4. Ascertaining whether or not ConEd’s outreach effort policies and procedures for providing accurate and timely information to customers, local officials, state agencies, and the general public throughout an electric emergency outage event are effective.

Best Practices

Audit responsibilities which support the Best Practices overall objective include:

5. Identifying areas of employed best practices within ConEd’s electric emergency outage program and recommending areas that might be suitable for the adoption of those best practices applicable to ConEd’s operating environment.
6. Determining the additional elements necessary for incorporation into, or enhancement of, ConEd management and operations structures, plans, and processes to achieve objectives and mitigate the effects of storms and other events on unplanned outages and thereby reduce the duration of subsequent response and service restoration efforts.
7. Comparing ConEd’s productivity to other electric companies across the nation (including, but not limited to, PECO Electric Company, PSE&G, and DTE Energy) and compare management practices which deal with labor productivity and its environment. Report on ConEd’s position relative to comparison companies.
8. Determining adequacy of ConEd’s capital program and maintenance budget; including plans for expenditures on jobs specifically identified to improve service and expenditures to reduce workload through proactive maintenance and rehabilitation.

^{3/} Reports filed in accordance with Part 105.4c of the New York Public Service Commission’s rules.

^{4/} Staff conducted a review of the January 2006 outage and is currently conducting a review of the July and September 2006 outages.



9. Determining how best to help ensure that ConEd's long-term performance meets the needs of electric customers throughout the New York City metropolitan area better than it has recently met them.

C. Audit Approach Highlights

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:

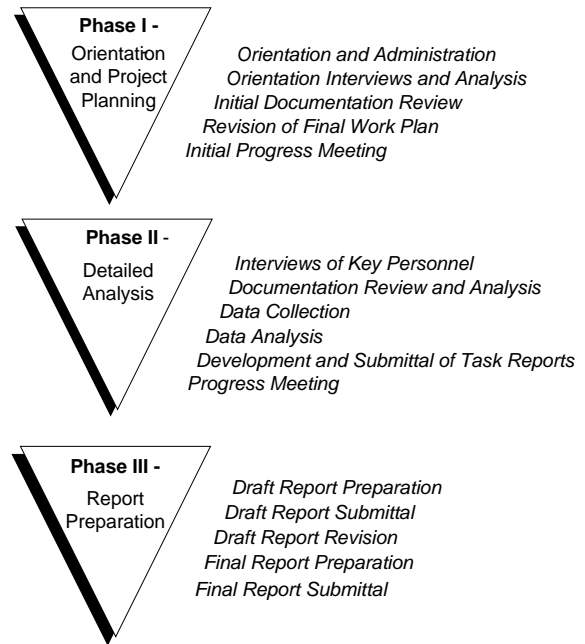
- ◆ *Active Participation and Involvement by the NYSDPS and ConEd* – The Schumaker & Company project team embraces a close working relationship with the NYSDPS and ConEd management and staff in conducting this audit. We believe that we have demonstrated this in our previous work. This type of relationship 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 other states including Indiana, Kentucky, Massachusetts, Maine, Michigan, New Jersey, Ohio, Pennsylvania, and Texas.
- ◆ *Logical, Efficient Methodology* – There are three phases of our study methodology. All of the phases, which are each composed of several tasks, are summarized in this chapter and discussed in detail in *Chapter III–Approach, Methods, Procedures, and Audit Management*. 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.
- ◆ *Straightforward, Concise Final Report* – The final report will contain detailed, meaningful findings and well-developed conclusions and recommendations. It will clearly address the level of compliance desired by the NYSDPS.
- ◆ *On-Site Presence* – Approximately 60% of the SCHUCO 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 ConEd management and staff.
- ◆ *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, and with the U.S. General Accounting Office's "Standards for Audit of Government Organizations, Programs, Activities, and Functions," as applicable to public utilities, which was recently amended in 1999 and 2006. PMIA has been specifically developed to meet the requirements of these standards.

- ◆ *Rationale for Findings* – The Schumaker & Company project team’s findings will be based on facts that are correct and true and, when combined with our consulting team’s 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.
- ◆ *Quantification 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 our *Project Management Information Application*, 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 ConEd 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 the NYPSC has ordered this audit, ConEd has a vested interest in the results. Furthermore, ConEd 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 ConEd 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 Consolidated Edison Company.

Synopsis of Study

We propose to conduct this audit based on a three-phase review process, which has been custom tailored to meet the objectives of the Commission. These three phases, and their components, are schematically summarized at right. 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 the NYSDPS and ConEd. This process was originally designed to establish and sustain vital, interactive working relationships among the NYSDPS, ConEd, and the Schumaker & Company project team during the course of this operations and performance audit. We have refined this three phase 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 – Consulting Staff Organization*.

D. Audit Deliverables and Benefits

This section summarizes the project deliverables and benefits resulting from our conduct of the proposed audit. The project deliverables that can be expected by the NYSDPS *Project Coordinator* during the course of this assignment 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 Coordinator</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 Coordinator</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"> ◆ Interview summaries 	<p>A formal interview summary will be prepared within five days of each interview, and will include the consultants' observations and conclusions, information requests generated, issues identified, and required follow up.</p>	<ul style="list-style-type: none"> ◆ Written interview summaries
<ul style="list-style-type: none"> ◆ Progress meetings 	<p>In order to promote optimum participation by, and interaction among, representatives of ConEd, the NYSDPS, and the Schumaker & Company team, we recommend three formal progress meetings during this project. Our project schedule identifies the time intervals of these progress meetings.</p>	<ul style="list-style-type: none"> ◆ Formal progress meetings
<ul style="list-style-type: none"> ◆ Final detailed work plan 	<p>At the end of the <i>Orientation and Planning</i> step, 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 ConEd during <i>Phase I – Orientation and Project Planning</i>. The revised work plan will then be used for both <i>Phase II – Detailed Analysis</i> and <i>Phase III – Report Preparation</i>.</p> <p>This information will be included in a resource-loaded critical path method (CPM) schedule for the project, which will be updated, at a minimum, on a monthly basis. This project schedule will be maintained in our offices.</p>	<ul style="list-style-type: none"> ◆ Paper copies ◆ First progress meeting
<ul style="list-style-type: none"> ◆ Outlines 	<p>For each task area identified in our proposal, a detailed outline will be submitted to the NYSDPS upon completion of 75% of the field work. The remaining field work allows the NYSDPS to reallocate, if appropriate, audit hours and dollars so the audit is completed to the complete satisfaction of the NYSDPS.</p>	<ul style="list-style-type: none"> ◆ Electronic files
<ul style="list-style-type: none"> ◆ Draft task reports 	<p>The results of our investigations in each functional area will be drafted as task reports for review first by the NYSDPS staff, and after NYSDPS approval, by ConEd. A three-party meeting will be held for discussion and to obtain ConEd's written comments which will be incorporated, as appropriate, into the final report.</p>	<ul style="list-style-type: none"> ◆ Electronic files or paper copies ◆ Second progress meeting



Deliverable	Content	Format
<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 Coordinator</i>. After NYSDPS approval, the draft report will be released to ConEd. ConEd 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 ConEd, 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 Coordinator</i> upon request for up to three years following issue of the final report.</p>	<ul style="list-style-type: none"> ◆ One (1) unbound, copy-ready draft report to both the NYSDPS and ConEd.
<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 Coordinator</i> and ConEd, 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"> ◆ One (1) electronic copy
<ul style="list-style-type: none"> ◆ Testimony or oral presentations 	<p>Presentations to various audiences or testimony as necessary, at Schumaker & Company's standard rates as identified in this proposal.</p>	<ul style="list-style-type: none"> ◆ Testimony ◆ Speeches ◆ Other as appropriate
<ul style="list-style-type: none"> ◆ Working papers 	<p>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 so that the working papers can be provided to the NYSDPS upon request. Also, duplicate working papers and supporting data will be provided to the NYSDPS <i>Project Coordinator</i> and filed in a locked cabinet on ConEd's premises. These documents will also be retained on site for three years following release of the final report</p>	<ul style="list-style-type: none"> ◆ PMIA database records and paper copies

More specific details on several of the above-listed deliverables are contained in *Chapter III – Approach, Methods, Procedures, and Audit Management* of this proposal.

III. Approach, Methods, Procedures, and Audit Management

This chapter summarizes the approach, review methodology, and preliminary work plan that Schumaker & Company, Inc. (SCHUCO) will apply to the operations and performance audit of Consolidated Edison Company (ConEd or Company) of New York's Electric Emergency Outage Program (EEOP) in Case 6-M-1078. This information is presented in three parts:

- ◆ Schumaker & Company's approach, which describes the SCHUCO philosophy with regard to audits and reviews of this type and which summarizes the key elements of our approach.
- ◆ Project management, which summarizes the processes we would use to plan and schedule the work, control the quantity and quality of the work performed, track work papers, and audit/review time, fees, and expenses.
- ◆ Project deliverables, which identifies the specific reports and documents we would develop during the course of this engagement and summarizes the manner in which we would attempt to communicate our findings and recommendations to the New York State Department of Public Service (NYS DPS).

A. SCHUCO's Approach

The majority of this chapter describes Schumaker & Company's approach to audits and related reviews. There are no real short cuts to this work. SCHUCO employs a methodology proven through the conduct of many such engagements, and under this methodology we will do the following:

- ◆ Conduct an independent audit of ConEd's system-wide operations, practices, and procedures as they relate to emergency planning, response to outages, and restoration of service.
- ◆ Assess the adequacy of the Company's management of its emergency outage responses and preparedness.
- ◆ Develop recommendations for actions that ConEd should take to improve its emergency outage planning, preparation, outreach, and restoration efforts throughout its service territory.

Schumaker & Company's assessment of ConEd's EEOP will address the three areas of project scope described in the request for proposal (RFP), as follows:

1. Planning/Preparedness – A review and evaluation of ConEd's performance with respect to the planning efforts and preparedness for electric outage emergencies. This will include a review of the policies and procedures that comprise the framework for the Company's response to such outages.

2. Performance/Effectiveness – This scope element will focus primarily on the ability of ConEd to mobilize adequate resources to properly respond to outages, establish critical priorities, effectively execute the response plan including the ability to make the necessary adjustments in response to changing circumstances, and the effectiveness of the Company’s communications with its customers, other responders, government agencies, and other stakeholders. This review will include a detailed assessment of restoration activities encompassing its ability to function effectively within the National Incident Management System framework and protocols.
3. Best Practices – A review and evaluation of ConEd’s practices for outage planning and restoration activities in comparison to the industry “best practices” appropriate to the Company’s operating environment. This will include an identification of the “best practices” that are employed by ConEd, as well as recommendations for implementing new best practices from around the electric industry that would improve ConEd’s performance in relation to electric emergency outage response.

The environment in which a review of this type takes place is a critical determinant of its success. The review should result in a balanced and objective appraisal of the EEOP processes and resource allocations. It should also result in identification of deficiencies where they have occurred, and, as applicable, provision of sound, implementable recommendations for their elimination.

Schumaker & Company’s participative approach is oriented to the production of a constructive document that presents a framework on which the ConEd and the NYSDPS can build – preferably a participatively developed product.

Review Methodology

In the course of well over 30 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. We are proposing that the project team follow a three-phase study process designed to achieve vital, interactive working relationships among the NYSDPS, ConEd, and our project team. Specifically, the three phases will be as follows:

- ◆ *Phase I – Orientation and Project Planning*
- ◆ *Phase II – Detailed Analysis*
- ◆ *Phase III – Report Preparation*

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

Phase I – Initial Review

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



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

Project Planning and Administration

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

- ◆ Establishment of administrative procedures for the project with the NYSDPS *Project Coordinator*, including:
 - Interview scheduling procedures
 - Information request procedures
 - Progress reporting procedures

- ◆ Installation of Schumaker & Company project management administrative procedures and computer capabilities for use on the project (see *Appendix A*)
- ◆ Familiarization of personnel with the use of interview and information request tracking systems
- ◆ Identification and scheduling of orientation interviews
- ◆ Submittal and review of initial information requests

Orientation Interviews and Analyses

During this portion of *Phase I*, we will investigate each of the areas in our preliminary work plan, as outlined later in this proposal in *Chapter IV – Areas and Issues for Review*. Schumaker & Company's *Project Manager, Lead Consultants*, and *Senior Consultants* will conduct these interviews and analyses as a means to perform a diagnostic review 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. The Schumaker & Company project team consultants will visit ConEd's relevant major facilities, conduct interviews with key NYSDPS and ConEd personnel (and others, as appropriate), and gather a variety of information and documents regarding policy, procedures, operations, and performance. The interviews with key management personnel will 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 ConEd employees will be identified at this time.

Documentation Review

SCHUCO consultants will review the documents provided in response to the initial data request to gain a better understanding of the organization and the situation. This will allow them to better assess which areas will need to have the greatest emphasis placed on them in the final work plan.

Revision of Final Work Plan

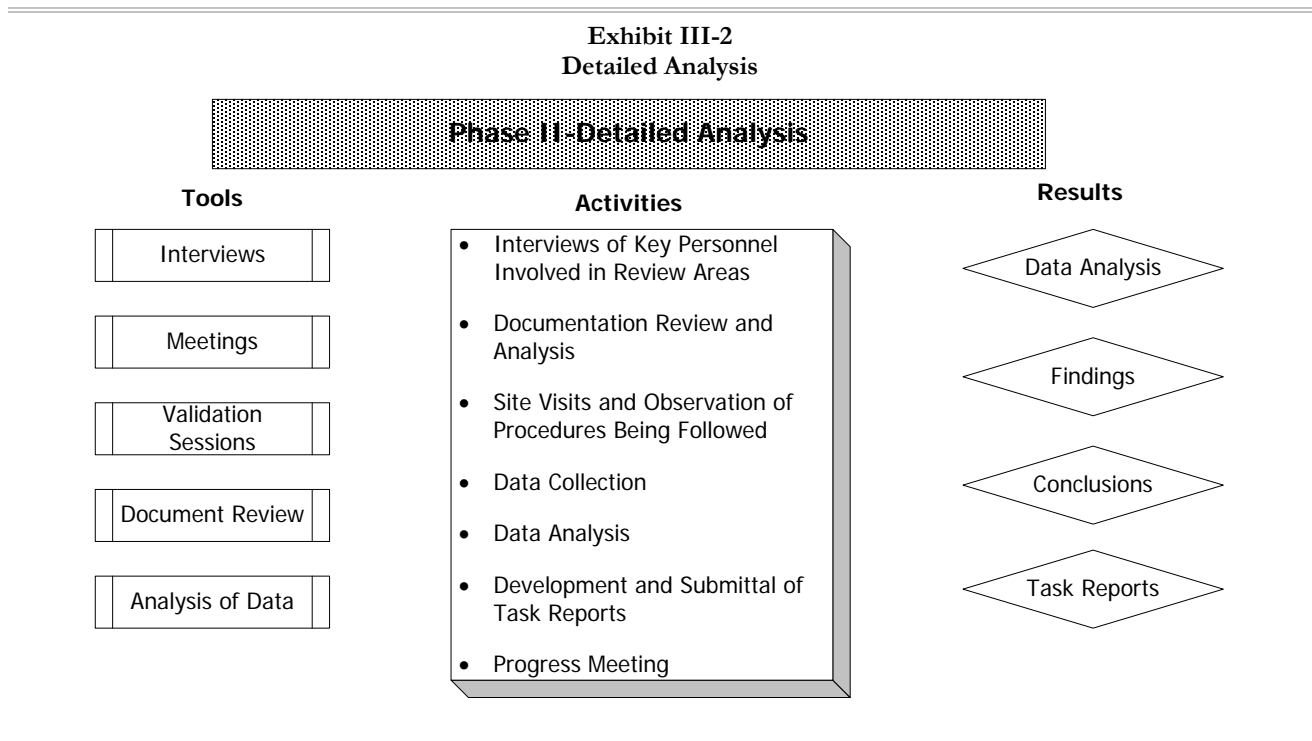
As part of this portion of *Phase I*, verbal presentations will be made to the NYSDPS and ConEd summarizing the results of our initial phase. The primary purposes of this step are to develop a deeper understanding of the specific concerns of the NYSDPS and ConEd and to provide further technical definition and direction to our project for the next audit phase. We will use this information to refine and streamline the work plan.

Initial Progress Meeting

Our project team will meet with the NYSDPS and ConEd coordinators to discuss the key issues that were determined to date. Also, additional input from the coordinators on the final 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 *Detailed Analysis* portion of the project will be confirmed.

Phase II – Detailed Analysis

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



Interviews of Key Personnel Documentation Review and Analysis Data Collection Data Analysis

Our project team will conduct interviews with key personnel, visit ConEd facilities as necessary, and gather a variety of information, and documents regarding:

- ◆ The policies and procedures that guide the EEOP process at ConEd
- ◆ Organizational structure and historical staffing levels at ConEd in relation to the EEOP
- ◆ Studies that have been undertaken by the Company to evaluate the effectiveness of the EEOP
- ◆ Statistical data and internal reports that reflect the level of effectiveness of the EEOP in actual operations in the recent past
- ◆ “Best practices” that ConEd has implemented in relation to their EEOP

This phase will result in the development of findings and conclusions by the consultants, which will be verbally presented to the NYSDPS and ConEd coordinators. In overall terms, this phase consists of



several principal activities: interviews, information and document reviews, and field observations of representative operations. The following text describes 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 identified issue areas.
- ◆ *Information and document reviews* – During the course of these interviews, information and documents relevant to the evaluation of each area are identified, requested and collected for analysis.
- ◆ *Field observations* – We will visit ConEd 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.

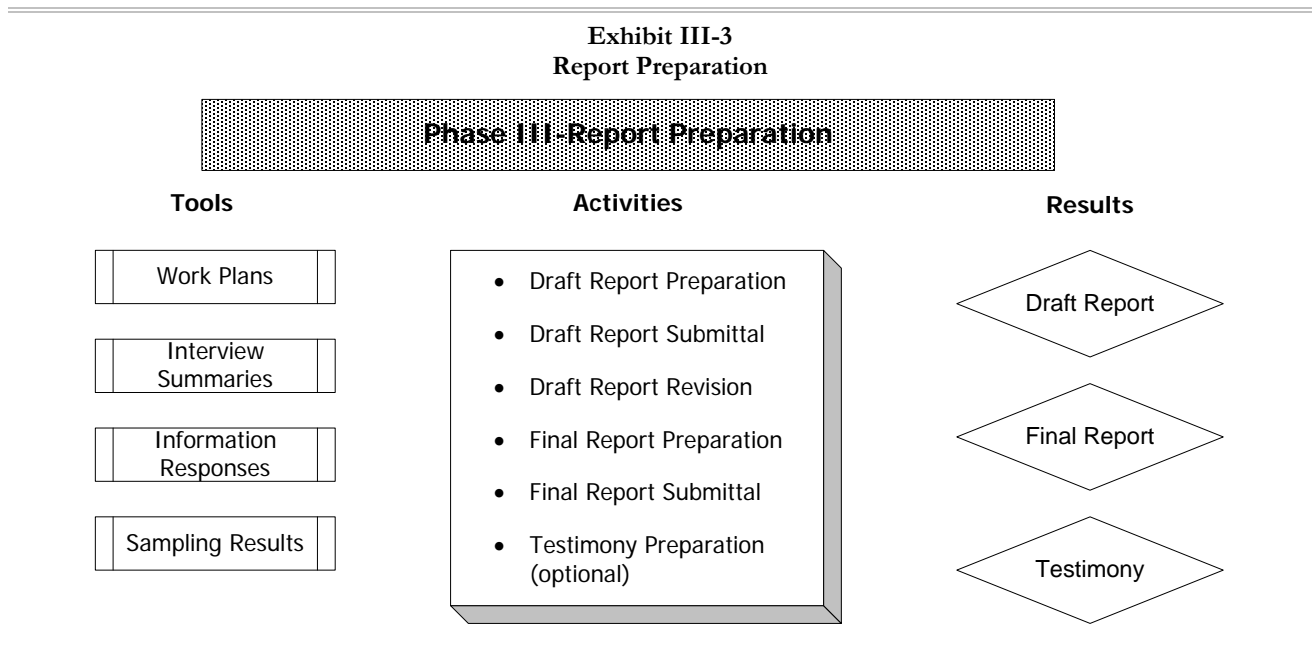
Development and Submittal of Task Reports Progress Meeting

Based on the results of the data collection and analysis activities, findings and conclusions will be formulated which reflect our summary evaluation of the subject practices. These will then be incorporated into task reports for each of the study areas that will also contain a brief description of background information relevant to each of the areas. These task reports will be submitted to the NYSDPS for review and comments. These comments will be incorporated into the task reports, which will then be submitted to the Company for review and comment, after the approval to do so by the NYSDPS. Again, these comments will be incorporated into the task reports as appropriate. These revised task reports will form the basis for the draft reports that are developed in the next phase.

A progress meeting will be held with the NYSDPS and the Company to discuss the task reports.

Phase III – Report Preparation

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



This phase 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 in the form of the revised task reports will be summarized into a draft report that will be submitted to the NYSDPS and, with the approval of the NYSDPS, to ConEd 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
- ◆ Findings and conclusions
- ◆ Recommendations

Our report will reflect an objective and balanced appraisal of ConEd's EEOP processes 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 also point out the strengths, good practices, and sound procedures associated with the delivery of electric service. 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 Coordinator* (and other staff as desired) for review and comment. After performing their review, the NYSDPS *Project Coordinator* will discuss resultant comments with the Schumaker & Company consulting team. The SCHUCO team will address all concerns raised by the NYSDPS *Project Coordinator*. Schumaker & Company will then submit the draft report to the ConEd *Coordinator* for review and comment. A third progress meeting will be held with the NYSDPS, ConEd, 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 Company, the current environment, and the emerging status of the EEOP. After incorporation of these comments into the report, as appropriate, the final report will be prepared and submitted.

Final Report Submittal

The Commission and the Company must be satisfied that end products are 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 in order to minimize any open questions that may occur at its end.

The final report will consist of the following information:

- ◆ Executive summary
- ◆ Brief overview of project
- ◆ Findings and conclusions
- ◆ Recommendations

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

Testimony

For this optional activity, Schumaker & Company consultants are available at our standard billing rates.

Philosophy

In summary, Schumaker & Company's overall approach is based on integrating each of the above elements into an overall philosophy that each consultant understands, appreciates, and to which he or she is fully committed. We bring a results-based (as opposed to a process-based) philosophy to reviews such as this one. We also place considerable emphasis on NYSDPS participation in the audit, and on

Company participation. These factors will enable the NYSDPS and ConEd to derive maximum benefit from this focused review.

B. Project Management Techniques

An operations and performance audit is a complicated consulting project requiring appropriate project management control techniques. The substantial experience of Schumaker & Company in conducting such studies has enabled us to develop effective techniques to control the project, enhance communications among the members of the project team, and among the consulting team, the NYSDPS Staff, and the Company, and assure a quality end product. These techniques have been utilized 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 SCHUCO project team members, the NYSDPS Staff, and ConEd personnel.
- ◆ Provide a focus for communication and control among the consulting team, the NYSDPS, and key individuals within ConEd
- ◆ 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. Two important lead positions exist in our project team, those being:

- ◆ The *Project Manager*, who provides general oversight and performs a quality assurance role during the assignment, and 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.
- ◆ 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. The *Lead Consultants* are responsible for:
 - 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 and a draft report for their areas of investigation
 - Ensuring a successful consulting project

The overall objective of the operations and performance audit is to determine the effectiveness of ConEd's EEOP processes and resource allocations, and deficiencies therein, if any. A corollary objective is to develop workable recommendations useful to ConEd and to the NYSDPS for the elimination of deficiencies identified, if any. The role of project management is to ensure that these objectives are met.

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.

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 analysis 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 (PMLA)* helps 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 *PMLA*.
- ◆ Schedule and track interviews through *PMLA*. The numerous summary and detailed reports enable Company personnel, NYSDPS 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 *PMLA*. 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 NYSDPS Staff. At the conclusion of the audit, a copy of the report indexed to the supporting documents will be furnished to the NYSDPS Staff. All supporting documents, with the exception of interview notes, and all documents obtained by SCHUCO during the audit will be turned over to NYSDPS Staff at the completion of the audit. Interview notes will be retained by SCHUCO (or transferred to the Commission for retention) for at least three years after the completion of the report and will be made available to NYSDPS Staff. SCHUCO will not copyright any material developed during the course of the project.

PMLA, a software package specifically developed for this purpose by the Schumaker & Company Information Technology staff, is discussed in more detail in *Appendix A* of this proposal.

Work Plans

Well-developed work plans lie at the heart of a well-controlled project. As previously explained, in *Phase I – Orientation and Project Planning*, we will prepare more specific work plans for each study area of *Phase II – Detailed Analysis*. The work plans will present:

- ◆ 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 *Phase I – Orientation and Project Planning* will be submitted to the NYSDPS *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 Project Team Meetings

The consulting team members regularly spend time at the end of each week discussing events and major findings among themselves and with the Schumaker & Company *Project Manager*. This informal process ensures that everyone is aware of the project status, and focuses attention on important issues. These discussions are used to track progress and update the detailed work plan and project schedule. We invite and actively encourage the frequent participation of the NYSDPS staff (or other appropriate personnel) in these discussions.

Monthly Progress Meetings

Schumaker & Company's project management team will meet each month with the NYSDPS and ConEd coordinators (and any other staff deemed appropriate) for purposes of discussing the project and resolving questions or problems.

Progress Meetings

Schumaker & Company's experience in conducting utility management audits in many states has identified the need to have periodic meetings involving appropriate NYSDPS and ConEd representatives. These meetings will be scheduled at the end of each phase to facilitate overall communication between the NYSDPS, ConEd, and SCHUCO consultants. The meetings are held to discuss any issues which 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 NYSDPS offices, the ConEd 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 NYSDPS and ConEd coordinators.

Progress and Time Reporting

Each team member will submit monthly time reports indicating the time expended by work area. Actual time expended for the project team will be aggregated by consultant and by focus area for comparison with the project budget. This will provide the basis for progress reporting and an ongoing assessment of project status.

Each month we will provide a written status report to the NYSDPS *Project Coordinator* that will consist of a:

- ◆ General narrative briefly describing progress to date and outlining reasons for any discrepancies between the project schedule and progress actually achieved
- ◆ Report of interviews and site visits scheduled, if applicable, for the following week
- ◆ Report of staff-days expended by activity in each task area
- ◆ Report of information requests at ConEd showing requested and received dates and status

We will also indicate the status of work in each study area in relation to its scheduled duration (i.e., ahead, behind, or on schedule).

Outlines

When the work in an area is substantially complete, we will provide the NYSDPS *Project Coordinator* with a briefing on our findings and recommendations. This will be preceded by our fact verification process to ensure the accuracy of the facts on which our conclusions are based. When SCHUCO has used 75% of

available consultant hours⁵ we will provide the NYSDPS *Project Coordinator* with a detailed outline of our final report.

Review Standards

SCHUCO subscribes to the audit standards set forth by the Comptroller General of the U.S. in the document titled Standards for Audits of Governmental Organization Programs, Activities and Functions - 1988 Revision (commonly referred to as the "Yellow Book"). All of the management, operations, and performance audits and reviews we have conducted have been in accordance with the audit standards set forth therein.

In addition, in the conduct of this review, SCHUCO commits to adhere to generally accepted accounting practices and to the NARUC Consultant Standards and Ethics for Performance of Management Analysis.

C. Project Deliverables

Schumaker & Company's approach is intended to produce positive results for the NYSDPS, the Company, and for ConEd's customers. We are able to achieve this by producing, and communicating the following:

- ◆ A comprehensive, detailed understandable report that evaluates the effectiveness of ConEd's EEOP operations and performance.
- ◆ Quantified practical recommendations for improvement, as applicable

The following specific reports will be produced. These will be provided in accordance with the requirements specified in the RFP.

- ◆ *Detailed Work Plan* –The Detailed Work Plan will describe the required work steps, documents, and data required, and interviews and analyses planned. In addition, it will provide a synopsis of work done to date (*Phase I* will include initial comprehensive data collection and system identification) and will contain a detailed schedule and budget. *Chapter IV – Areas and Issues for Review* of this proposal contains a preliminary version of this Detailed Work Plan. SCHUCO will confer with NYSDPS Staff and ConEd in the creation of its initial Detailed Work Plan. Following submission of an initial draft to NYSDPS Staff, Parties to Case 06-M-1078 will be given an opportunity to comment on it. After giving due consideration to parties' comments, SCHUCO may modify the initial draft and submit a final draft to NYSDPS Staff for approval.

^{5/} SCHUCO understands that the Commission will withhold 15% of fees until the Work Plan is approved, at which time it will reduce an increment of 5%; thereafter it will withhold 10% of fees. No more than 75% of fees will be paid until the draft report is delivered to Commission Staff. SCHUCO will prepare a series of milestones, in addition to the above, for payment.

- ◆ *Weekly Informal Reports* – By the second workday of each week, SCHUCO will provide written notice of the interviews and site visits scheduled for the following week to the NYSDPS *Project Coordinator* for review and approval.
- ◆ *Monthly Written Status Reports* – Based on the task plan submitted with the proposal, the monthly reports will consist of two parts:
 - General narrative briefly describing progress to date and outlining reasons for any deviations from the task plan schedule. This narrative will also contain a statement indicating the status of the project in relation to time; that is ahead, behind, or on schedule.
 - Status sheet indicating actual hours logged by category (i.e., project manager, lead/senior consultant, consultant, analyst, etc.), by consultant, material and supplies cost, and other costs, showing percentage of each in relation to proposal costs.
- ◆ *Monthly Oral Reports* – We are prepared to present oral reports monthly, in Albany or in New York City. Presentations would include the SCHUCO *Project Manager* and *Lead Consultants*, as appropriate. We will plan also for a midpoint status meeting with Staff.
- ◆ *Draft/Final Report* – As stated in the RFP, the procedure to develop the Final Report will evolve in two steps:
 - a. The draft report will be sent to NYSDPS Staff for review upon completion. NYSDPS Staff will approve the release of the report by SCHUCO to ConEd for its review. This process will ensure that material facts having an impact on the findings are not omitted. If ConEd wishes to submit written review comments, they should do so within 15 working days of receipt of the draft report to both SCHUCO and NYSDPS Staff for review. A final draft will be prepared after ConEd has submitted all its written comments on the draft report. Parties to this case will be given the opportunity to comment on the draft report. An exit conference will be held at the request of any of the parties, if deemed necessary.
 - b. The final report is to be written at a level that assumes a fundamental understanding of common utility terminology and operations. It is intended for an audience consisting of interested parties, the Commissioners, NYSDPS Staff, and Company management, and highly technical terms, jargon, and undefined acronyms will not be used. SCHUCO plans to include the following in the Final Report:
 - Introduction which will include the objectives, scope, and approach to the audit
 - Executive Summary containing Schumaker & Company’s conclusions on the effectiveness of ConEd’s EEOP programs and processes
 - Findings, conclusions, and recommendations regarding the adequacy of the ConEd EEOP
 - A schedule of recommendation priorities



- ◆ *Report Copies* – SCHUCO shall provide an electronic version of the final report that is compatible with the NYSDPS’s software. If NYSDPS Staff determines that SCHUCO should provide printed copies of the final report, we will comply with the requirements set forth and expect appropriate reimbursement for our cost of printing.
- ◆ *Testimony* – SCHUCO is willing to stand behind its conclusions and recommendations by testifying, if necessary, in a future rate case or other proceeding before the Commission at its standard compensation rates.

SCHUCO also understands that the schedule for the initial draft report is August 2007. This initial draft report must provide the results of our review, and recommendations in sufficient detail to support specific findings at that point. Thereafter, SCHUCO will present a revised draft report to the parties to Case 06-M-1078. At the discretion of the NYSDPS, a hearing on the report may be convened. If such a hearing is convened, SCHUCO may be required to present its revised draft report including findings and recommendations within the context of this formal hearing. To that end, SCHUCO will be prepared to defend the report and respond to examination by parties. In the final report, SCHUCO may make modifications to address specific parties’ comments as it deems necessary after consultation with NYSDPS Staff.

IV. Areas and Issues for Review

The New York State Department of Public Service (NYSDPS) request for proposal (RFP) specified in the Guide for Case 06-M-1078 that *Chapter IV – Areas and Issues for Review* must include a description of how the scope and issues identified in the Commission Order will be examined during the audit and how Schumaker & Company (SCHUCO) will be assigned to complete the scope and meet expected deadlines.

This chapter presents SCHUCO's preliminary work plan for achieving the collective objectives cited above, in an efficient, economical manner. Three Task Area Work Plans are provided. Each covers all elements of the work in the terms of the three step SCHUCO methodology: Orientation and Project Planning, Detailed Analysis, and Report Preparation. Initial Information Requests are listed for each of the Task Area Work Plans. Task Area Work Plans are provided for:

- ◆ Task Area 1 – Electric Emergency Outages – Planning/Preparedness
- ◆ Task Area 2 – Electric Emergency Outages – Performance/Effectiveness
- ◆ Task Area 3 – Electric Emergency Outage Planning – Best Practices

As discussed in *Chapter V Consulting Staff Organization*, Schumaker & Company has organized its project team along these three task areas. We have teamed a Schumaker & Company consultant and an Emergency Preparedness Partnerships (EPP) consultant to be responsible for investigating, documenting, and reporting on the specific issues contained in the specific task area to which they are assigned. Whereas, we feel that this teaming arrangement makes the most sense for this project, we might vary the organization of the project team based on what we learn during the *Phase I – Orientation and Project Planning*. For instance, we would expect that Consolidated Edison (ConEd) would have one overall Emergency Response Plan; however it might be implemented differently in the various divisions or service areas. It is our current understanding that ConEd is organized into various regions – such as Staten Island, Brooklyn/Queens, Manhattan, Westchester, etc. – and the extent to which the Emergency Response Plan is similar in each region would need to be assessed. Therefore, as a result of our *Phase I Orientation and Project Planning* activities, we might decide to change the project organization along regional lines with one SCHUCO/EPP team performing a complete review of Staten Island, and another SCHUCO/EPP team a complete review of Westchester etc. This will be determined and agreed to with the NYSDPS during the final work plan approval process of *Phase I – Orientation and Project Planning*.

Each SCHUCO/EPP team will be assisted by other consultants, as needed. We have included additional Schumaker & Company and Emergency Preparedness Partnerships consultants with specific specialized skills, such as Mr. Siegfried Guggenmoos, a vegetation management (tree trimming) consultant, who will be made available on an as-needed basis. However the actual hours that will be assigned to these available individuals will be determined during the development of the final work plan during *Phase I – Orientation and Project Planning*.

The scope of our proposed audit is organized along the three elements identified in the RFP specifically:

- ◆ ***Planning/Preparedness*** – This element centers on the Company's planning efforts for electric emergency outages. It incorporates a review of the policies and procedures that form the framework for the Company's response to electric emergency outages.
- ◆ ***Performance/Effectiveness*** – This element focuses on the Company's ability to mobilize adequate resources, establish critical priorities, effectively execute plans with the agility needed to quickly make adjustments in response to changing circumstances, and the effectiveness of the Company's communications with customers, other responders, stakeholders, etc. Included in this review will be a detailed assessment of restoration activities encompassing its ability to function effectively within the National Incident Management System framework and protocols.
- ◆ ***Best Practices*** – This aspect of the audit will compare the Company's electric emergency outage planning and restoration activities to industry "best practices" appropriate to the Company's operating environment.

In developing our preliminary work plan, we have taken the liberty of repeating the information contained within the RFP and then further elaborating on each of those areas with specific work tasks and information requests. Our audit will identify best practices that the Company has adopted or should consider employing in the area of electric emergency outage response, as well as opportunities for improvement.

A. Electric Emergency Outages – Planning/Preparedness

This aspect of the review should focus on the adequacy of the Company's overall electric emergency preparation and response planning process and Consolidated Edison's Emergency Response Plan. These efforts should be designed to assure that there is effective response and prompt restoration of electric service in response to an electric emergency outage. The review of the planning process will also address the actions the Company takes in anticipation of an event that may result in an electric emergency outage (storm or sustained hot weather) and what steps can be taken to reduce the impact of the outage. Recent changes in the planning and response processes will be identified and assessed.

The review will also include an organizational assessment of the Company's internal structure for managing service interruptions and the adequacy of the Company's overall resources (personnel, equipment,⁶ and facilities, as well as resources from third party providers such as rental generators) that are available for electric emergency outages. With respect to the organizational structure, the audit will assess the reporting relationships established and the roles and responsibilities of organizations and personnel involved in electric emergency outage planning, response, and restoration. Training is an

⁶ For example, are crews prepared in the event of an emergency? Is response time extended by not having equipment already available on site (i.e., do crews need to request/obtain supplies and equipment prior to dispatch)?

important component of planning, and the audit will review and assess the adequacy of the Company's training efforts for electric emergency outages.

The review will also include an evaluation of the Company's planning criteria and operating policies, plan activation thresholds, as well as the personnel and equipment available (both in-house and from outside providers, including other utilities) to the Company to respond aggressively to large-scale outage emergencies and the Company's planning efforts associated with deploying and managing these resources in an optimal manner. SCHUCO will include a thorough review of how the Company collects the data regarding outages/interruptions, including the accuracy and integrity/independence of the data and how that data is used. The review includes an assessment of load reduction plans/policies incorporated in the Company's planning models and/or policies and procedures. The review will also assess the ability of the Company to manage and respond to multiple and simultaneous large-scale outages occurring in different operating areas. The audit will identify the effectiveness of systems and procedures the Company employs for determining the extent of damage incurred, number of customer outages, and developing service restoration estimates. Consideration will be given to the internal communication process and the use of data information systems for restoration planning purposes. SCHUCO will address the potential availability of information from other sources (e.g., cable TV providers) as to individual retail customers impacted by an outage. The audit will also review the Company's procedures for obtaining assistance from other utilities, equipment providers, and contractors and its ability to effectively deploy and manage these additional resources. Finally, this aspect of the audit will ascertain if the Company's plans and procedures provide for effective communication and outreach efforts on a regular basis, including its policies and procedures for providing services and accurate information to customers, local officials, state agencies, and the public throughout the electric emergency outage event.

Work Tasks

- ◆ Review and document the normal, day-to-day organization of ConEd and in particular the electric operations, transmission and, distribution organizations
- ◆ Review and document the emergency response organization of ConEd and in particular electric operations, transmission and distribution organizations
- ◆ Review the planning processes associated with emergency response, in particular:
 - Emergency response organization
 - Emergency response activation – criteria and process for activation of Emergency Response Plan
 - Emergency response operating condition levels
 - Storm restoration process
 - Damage assessment process



- Emergency operations center and supporting roles duty guidelines
- Regional emergency response center activation process
- Functional emergency response centers
 - Vegetation
 - Communications
- Emergency response staffing plan
- Operations Control Center dispatching support
- Primary/secondary restoration
- Screener operations
- 911 Center staffing
- ◆ Review outage reporting systems
 - Outage Management System
 - Predicative capabilities
 - Remote data terminal implementation
 - GIS capabilities
 - Automated meter reading (AMR) interface, if applicable
 - CAIDI and SAIDI reporting systems
 - Data warehouse and data mining capabilities
 - Graphical capabilities
- ◆ Review use of temporary generation
- ◆ Review training programs for emergency restoration
- ◆ Review mutual assistance programs
- ◆ Review field force staffing models – tie to CAIDI
- ◆ Review use of Estimated Restoration Times (ERT)
- ◆ Review public communication plan

Initial Information Requests

- ◆ High level organization charts for ConEd
- ◆ Complete organization charts for the electric operations – transmission and distribution operations
- ◆ Complete organization charts for the emergency response operations of ConEd

- ◆ Emergency Restoration Procedures addressing all of the items in the above work steps
- ◆ Descriptions of CAIDI and SAIDI reporting systems and capabilities
- ◆ Status report on use of automatic meter reading (AMR) and its tie to the Outage Management System (OMS)
- ◆ Status report on use of GIS and its tie to OMS
- ◆ Mutual aid agreements and exercise schedule
- ◆ Field force staffing models used

B. Electric Emergency Outages – Performance/Effectiveness

This aspect of the audit will review the Company's actual electric emergency outage performance including execution of its Emergency Response Plan. There will be a specific focus on the effectiveness of the Company's electric emergency outage performance and include detailed information reflecting the Company's historical performance in electric emergency outage restoration activity. SCHUCO will review the Company's internal assessments ("lessons learned") of electric emergency outages, the Company reports filed in accordance with Part 105.4c of the New York Public Service Commission's rules, and Department of Public Service Staff reviews of Consolidated Edison Outages from 1999 through 2006 and determine whether the recommendations from these assessments were implemented. Where necessary, SCHUCO will perform an independent analysis of any aspect of the Company's performance during 2006 to make its assessment complete.

The SCHUCO consulting team will detail the effectiveness of the Company in deploying and managing personnel and equipment in the most optimal manner and its effectiveness in communicating information internally. The review will focus on determining if the Company's policies and procedures were activated appropriately and ultimately followed. SCHUCO will verify the accuracy of the data collection systems used for determining the extent of outages, including the number of customers affected and the development of an accurate estimate of the time for service restoration. SCHUCO will also review the results of all interruption reporting systems (including customer-based interruption reporting systems) and assess the data collection process for and accuracy of such systems. The audit will also assess the incorporation of network supply/load reduction actions taken by the Company to meet the emergency situation(s). SCHUCO will assess the effectiveness of the Company's procedures for obtaining assistance from other utilities and contractors and its ability to effectively deploy and manage these additional resources. Finally, this section of the audit will evaluate the Company's procedures to assure effective outreach efforts on a regular basis, including its policies and procedures for providing accurate and timely information to local officials, state agencies, and the public throughout the electric emergency outage event.

Work Tasks

- ◆ Review the documented Emergency Response Plan
- ◆ Review and assess all “lessons learned” reports for outages from 1999 through 2006
- ◆ Review and assess all Company reports filed in accordance with Part 105.4c of the New York Public Service Commission's rules, and Department of Public Service Staff reviews of Consolidated Edison Outages from 1999 through 2006 and determine whether the recommendations from these assessments were implemented.
- ◆ Review CAIDI and SAIDI performance indicators
- ◆ Interview external agencies such as NYC OEM, Westchester County OEM, NYMAG, etc.
- ◆ Review customer outage restoration curves
- ◆ Review call out performance
- ◆ Review data collection audit (scrubbing) procedures
- ◆ Review system design with respect to cut outs, cut overs, load shedding, etc.
- ◆ Review vegetation management practices
- ◆ Review cutouts and re-closure practices
- ◆ Review distribution line automations (as compared to substations)
- ◆ Review CAIDI improvement programs
 - Goals and objectives
 - CAIDI gap analysis
 - Tools and techniques
 - Digital fault locating technology
 - Mobile data terminals
 - Cutouts switches
 - GIS routing
 - Mid-circuit reclosures
 - Automatic meter reading (AMR)
 - Mid-point faulted circuit indicators
- ◆ Review customer satisfaction reports
- ◆ Review preventative maintenance procedures
- ◆ Review use of Estimate Restoration Time (ERT)
 - Use
 - Tracking of performance
- ◆ Review call out process automation

- ◆ Review use of callbacks
- ◆ Review use of any damage prediction models
- ◆ Review ongoing training and system drills
- ◆ Review OMS capabilities
- ◆ Review use of a tiered response system
- ◆ Review contractor alliances and commitments to storm restoration
- ◆ Review restoration process
 - Cut and run
 - Permanent repairs
 - Oldest outage
- ◆ Review storm dispatching process
 - Additional dispatch
 - Remote dispatch
- ◆ Review callout process timeframes and mobilization sequences
- ◆ Review Voice Response Unit (VRU) usage
- ◆ Review real time reporting system
 - Summary information
 - Detailed information
- ◆ Review system recovery plan – system restored back to pre-storm configuration
- ◆ Review customer care and interface training
- ◆ Review employee recognition plan as it relates to storm restoration

Initial Information Requests

- ◆ Emergency Response Plan documentation
- ◆ Emergency Restoration Process documentation
- ◆ All Company reports filed in accordance with Part 105.4c of the New York Public Service Commission's rules, and Department of Public Service Staff reviews of Consolidated Edison Outages from 1999 through 2006
- ◆ CAIDI and SAIDI performance indicators for past five years
- ◆ Mutual assistance processes and procedures, contracts, procedures for managing external crews, and work package development processes
- ◆ Listing of the 100 worst performing circuits



- ◆ Vegetation management program description
- ◆ Cutouts and re-closure practices
- ◆ Distribution line automations (as compared to substations) installed
- ◆ Tools and techniques
- ◆ Digital fault locating technology status
- ◆ Mobile data terminals status
- ◆ Cutouts switches status
- ◆ GIS routing status
- ◆ Mid-circuit reclosures status
- ◆ Automatic meter reading (AMR) status
- ◆ Mid-point faulted circuit indicators status
- ◆ Customer satisfaction reports
- ◆ Preventative maintenance procedures
- ◆ Estimate Restoration Time (ERT) process description
- ◆ Call out process description
- ◆ Description of callbacks process
- ◆ Damage prediction model description
- ◆ Description of ongoing training and system drills
- ◆ OMS capabilities description
- ◆ Description of tiered response system
- ◆ Copies of contractor alliances (contracts)
- ◆ Restoration process description
 - Cut and run
 - Permanent repairs
 - Oldest outage
- ◆ Storm dispatching process and technologies description
 - Additional dispatch
 - Remote dispatch
- ◆ Details on callout process timeframes and mobilization sequences
- ◆ Voice Response Unit (VRU) script
- ◆ Real time reporting system descriptions

- Summary information
- Detailed information
- ◆ Copy of system recovery plan – system restored back to pre-storm configuration
- ◆ Description of customer care and interface training
- ◆ Description of employee recognition plan as it relates to storm restoration

C. Electric Emergency Outage Planning – Best Practices

In this portion of the audit, the SCHUCO consulting team will identify how industry “best practices” are employed within the Company's Electric Emergency Outage Program, and if not employed, which areas might be suitable for the adoption of those best practices applicable to the specific attributes of the Company's operating environment. SCHUCO will identify and review the "best practices" of the industry to identify any significant differences in electric emergency response planning, response, restoration, and communications that exist (between ConEd and industry accepted “best practices”) and the underlying reasons for such variances. Additionally, the consulting team will identify opportunities for improvements (in area such as tree trimming, undergrounding, rerouting, technical innovations, etc.) in the Company's practices and procedures that would or could mitigate the effects of storms and other events on unplanned outages and reduce the magnitude of such outages and the duration of the subsequent emergency response and service restoration efforts. Findings and recommendations relative to best practices will be presented either as a separate section of the report, or subsumed in each of the functional areas identified.

Work Tasks

- ◆ Review any Company Best Practices studies performed in the area of Emergency Response from 1999 through 2006

In relation to our Best Practices review and evaluation, some of the functional areas that we would evaluate in relation to the potential for best practices implementation would include the following:

- ◆ Vegetation management practices
- ◆ Cutouts and re-closure practices
- ◆ Distribution line automations (as compared to substations)
- ◆ CAIDI improvement programs including:
 - Goals and objectives
 - CAIDI gap analysis
 - Tools and techniques
 - Digital fault locating technology



- Mobile data terminals
- Cutouts switches
- GIS routing
- Mid-circuit reclosures
- Automatic meter reading (AMR)
- Mid-point faulted circuit indicators
- ◆ Preventative maintenance procedures
- ◆ Use of Estimate Restoration Time (ERT)
 - Use
 - Tracking of performance
- ◆ Call out process automation
- ◆ Use of callbacks
- ◆ Use of any damage prediction models
- ◆ Ongoing training and system drills
- ◆ OMS capabilities
- ◆ Use of a tiered response system
- ◆ Contractor alliances and commitments to storm restoration
- ◆ Restoration process
 - Cut and run
 - Permanent repairs
 - Oldest outage
- ◆ Storm dispatching process
 - Additional dispatch
 - Remote dispatch
- ◆ Callout process timeframes and mobilization sequences
- ◆ Voice Response Unit (VRU) usage
- ◆ Real time reporting system
 - Summary information
 - Detailed information
- ◆ System recovery plan – system restored back to pre-storm configuration
- ◆ Customer care and interface training
- ◆ Employee recognition plan as it relates to storm restoration

Initial Information Requests

The following information requests would be reviewed as to their potential for the implementation of Best Practices at ConEd:

- ◆ Vegetation management program description
- ◆ Cutouts and re-closure practices
- ◆ Distribution line automations (as compared to substations) installed
- ◆ Tools and techniques
- ◆ Digital fault locating technology status
- ◆ Mobile data terminals status
- ◆ Cutouts switches status
- ◆ GIS routing status
- ◆ Mid-circuit reclosures status
- ◆ Automatic meter reading (AMR) status
- ◆ Mid-point faulted circuit indicators status
- ◆ Customer satisfaction reports
- ◆ Preventative maintenance procedures
- ◆ Estimate Restoration Time (ERT) process description
- ◆ Call out process description
- ◆ Description of callbacks process
- ◆ Damage prediction model description
- ◆ Description of ongoing training and system drills
- ◆ OMS capabilities description
- ◆ Description of tiered response system
- ◆ Copies of contractor alliances (contracts)
- ◆ Restoration process description
 - Cut and run
 - Permanent repairs
 - Oldest outage
- ◆ Storm dispatching process and technologies description
 - Additional dispatch

- Remote dispatch
- ◆ Details on callout process timeframes and mobilization sequences
- ◆ Voice Response Unit (VRU) script
- ◆ Real time reporting system descriptions
 - Summary information
 - Detailed information
- ◆ Copy of system recovery plan – system restored back to pre-storm configuration
- ◆ Description of customer care and interface training
- ◆ Description of employee recognition plan as it relates to storm restoration

Each of the above items will be the foundation of the report prepared by the SCHUCO consulting team. A final report will be prepared and all findings and recommendations will be thoroughly documented. While the scheduled date for the initial draft is August 2006, it is our intention to inform both NYSDPS Staff and the Company of any matters of significance in advance of the initial report (as they are identified) that would, if adopted, improve the Company's electric emergency outage response.

V. Consulting Staff Organization

This chapter presents the team that Schumaker & Company, Inc. will assign to the operations and performance audit of Consolidated Edison's Electric Emergency Outage Program (EEOP). In this introduction we identify the Schumaker & Company, Inc. (SCHUCO) contact, as well as the contact for our associate firm Emergency Preparedness Partnerships (EPP), and describe the project organization and staffing with specific Task Area assignments. As specified in the Guide for Case 06-M-1078, we have also included a description of how the scope and issues identified in the Commission Order will be examined during the audit and how the Schumaker & Company (SCHUCO) consulting team will complete the scope and meet expected deadlines. The balance of the chapter provides the resume of each proposed consultant.

Prime Consultant: Schumaker & Company, Inc.

Established: 1986 (C corporation)

Headquarters: 3101 Walnut Ridge Drive
Ann Arbor, MI 48103-2195

Phone: (734) 998-5550 **Fax:** (734) 998-5590

Contact: Dennis J. Schumaker

Email: dschumaker@schuco.com

Website: www.schuco.com

Subcontractor Consultant: Emergency Preparedness Partnerships

Established: 2001

Headquarters: 552 N. First Rd., Suite 102
Hammonton, NJ 08037

Phone: (609) 704-0266 **Fax:** (609) 704-8243

Contact: Eileen K. Unger

Email: eunger@emergencypreparednesspartnerships.com

Website: www.emergencypreparednesspartnerships.com

A. Past Experience Highlights

Schumaker & Company has a unique blend of functional knowledge and hands-on management experience with over 20 years of experience in facilitating change in both private and public organizations. We have either performed management and operational reviews, operations and performance audits, or facilitated change in (1) electric, gas, water, and telecommunications companies, (2) federal, state, and local government, and (3) other private industries.

EPP's associates possess over 150 years of combined experience in storm restoration planning, emergency planning, emergency management, engineering, construction, security, crisis communications, and law enforcement. With this diverse and extensive background, EPP is equipped to help organizations prepare for natural or man-made disasters.

Included in the following text is specific information related to clients for whom SCHUCO and EPP have recently provided services similar to those required for the ConEd EEOP project.



SCHUCO Project Examples

Highlights of the SCHUCO consulting team's capabilities and experience are presented in the following text, however, a more extensive reference list and project details can be found in *Chapter VII – Qualifications of the Firm*.

- ◆ SCHUCO is currently engaged in the final stages of completing a stratified management and operations audit of PECO Energy Company. Assisting the Pennsylvania Public Utility Commission (PUC) staff, this audit consists of three phases. The first phase is a diagnostic review assessing the condition of each functional area or business unit against evaluative criteria or expected business practices. While this review is primarily limited to determining if appropriate management controls, systems, and processes are in place, it is of sufficient scope to identify significant problems, if any, requiring additional focused analysis. All recommendations are quantified except where this is impossible. The second phase is an in-depth analysis of pre-identified areas or issues. 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. The third phase, if necessary, will be an in-depth, focused analysis of specific areas or issues approved by the Bureau of Audits resulting from the diagnostic review in the first phase.

SCHUCO will prepare the final report based on the draft report, comments received from the Commission *Project Officer* and PECO, 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. Presentations to various audiences or testimony will be provided as necessary. This assignment involves ten consultants for roughly 4,000 hours during a 9-month effort for a total project cost of approximately \$843,000.

- ◆ As a subcontractor, Schumaker & Company consultants held *Project Manager, Lead Consultant, and Senior Consultant* positions in the review and evaluation of Verizon NY's efforts to provide retail service quality that consistently met the requirements of the New York Telephone Service Standards, as required by the New York Public Service Commission (PSC). In February 2002, the PSC ordered Verizon NY to institute a retail service quality plan, titled the Verizon Incentive Plan (VIP). After comparing 2002 service results with the same period in 2003, results generally declined and the PSC ordered an investigation to be conducted to review Verizon NY's retail service quality effort from four perspectives: performance, analysis, capital expenditures and maintenance, and best practices.

SCHUCO analyzed, documented, and verified Verizon NY operations and performance data, through findings based on identifiable and measurable information and data, to evaluate Verizon NY's existing service quality plans and practices in relation to 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). The results of the preceding evaluation were then used to determine if Verizon NY's performance and company guidelines

met applicable service quality performance standards and NY Telephone Service Standards, including reasonably foreseeable events and contingencies. The consulting team 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 being met. The project team 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. This one-year assignment involved 11 consultants (of which Schumaker & Company provided four) and required over 6,900 hours for a total project cost of approximately \$1,600,000.

Emergency Preparedness Partnerships (EPP) Project Examples

Emergency Preparedness Partnerships (EPP), founded in January, 2001, has been helping utility companies prepare for emergencies through plan development, review, and audit; training and plan implementation; drills and exercises; standard operating procedure development; and vulnerability assessments and physical security assessments. EPP's strength is in working closely with utility companies as an expert resource in the roles of assessors, planners, facilitators, trainers, observers and evaluators. EPP's expertise goes well beyond preparing for emergencies by helping utility personnel develop, practice, and implement practical, real-world plans and processes based on their unique needs. Clients have included Atlantic City Electric, Conectiv, Consolidated Edison, Delmarva Power, Duquesne Light, Orange & Rockland, PECO, Pepco Holdings, Inc., South Jersey Gas Company (SJI Corporation), and Artesian Water Company, where projects like the following are representative.

- ◆ Assessment of an Electric System Emergency Restoration Plan, including the development of strategies to enhance the response organization and overall storm management. This included a review of the Plan and provision of a recommended organizational structure to implement the proposed solutions, identification of deficiencies in executing the plan and strategies on how to overcome them, identification of key functions missing from the plan, and suggestions of enhancements to general storm management.
- ◆ Developed and conducted Incident Command Training, four tabletop exercises and a three-day functional exercise to prepare the company for a Corporate Storm Readiness Program summer session. Incident Command Training was conducted for all personnel with a designated role within the Incident Response Plans. Tabletop exercises were conducted regionally, with approximately 100 personnel participating in each. The functional exercise was conducted over the course of 3 days and included close to 30 company locations simultaneously. Opportunities for improvement were identified.
- ◆ Conducted a review of the Business Continuity Plan and recommended corrective actions. Reviewed approximately 60 department-specific business continuity plans and provided input regarding the quality and content of the plans. Also reviewed the interdependencies to ensure that overlaps were eliminated and gaps were filled.



- ◆ Conducted an audit of the physical security of the company’s critical assets. This included an asset assessment, threat source analysis, identification of infrastructure interdependencies, assessment of operations security, and reviews of drill/test of emergency procedures, the response/restoration/rebuild capabilities for infrastructure damage, and security strategies and plans. This project involved a significant number of interviews and visits to critical facilities, as well as the management of confidential plans, maps, and procedures.

B. Personnel

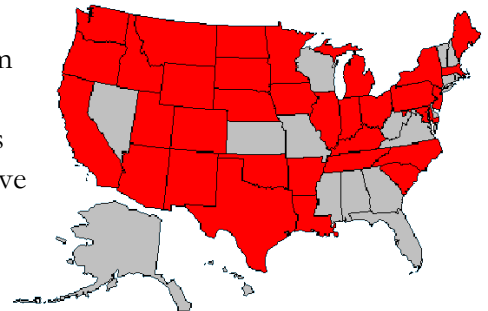
Schumaker & Company’s senior consultants have extensive experience in management, operations, and technology consulting in a project environment. They typically hold advanced degrees and average more than 25 years of professional experience. Our proposed project team is expert in the technical aspects of electric, gas, water, and telecommunications operations, as well as relevant regulatory proceedings. This combined knowledge base makes our firm uniquely qualified for the most complex and demanding assignments.

Many of our consultants are *Certified Management Consultants (CMCs)*,⁷ *Project Management Professionals (PMPs)*,⁸ *Microsoft Certified Professionals (MCPs)*,⁹ *Microsoft Certified System Engineers (MCSEs)*, or *Microsoft Certified Systems Developers (MCSDs)*. Schumaker & Company is also a *Microsoft Certified 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.

Our consultants have conducted comprehensive and focused management and operations assessments of organizations nationwide. Schumaker & Company has performed consulting assignments for clients in 33 states. Our clients benefit from the competence, knowledge, and attention of a core team of highly skilled professionals who work well together. This structure enables us to offer the recognized expertise, senior-level staffing, and administrative support characteristic of larger firms, without comparable overhead. Additionally, we provide the important benefits of flexibility and attentiveness that only smaller firms can offer.



EPP works with utilities, hospitals, and a variety of companies. EPP consultant experience goes well beyond preparing for emergencies; they help clients develop, practice, and implement practical, real-world plans and processes based on the unique needs of the company.

⁷/ “CMC” and CMC logo are certification marks of the Institute of Management Consultants (IMCUSA) that are registered in the US and other nations.

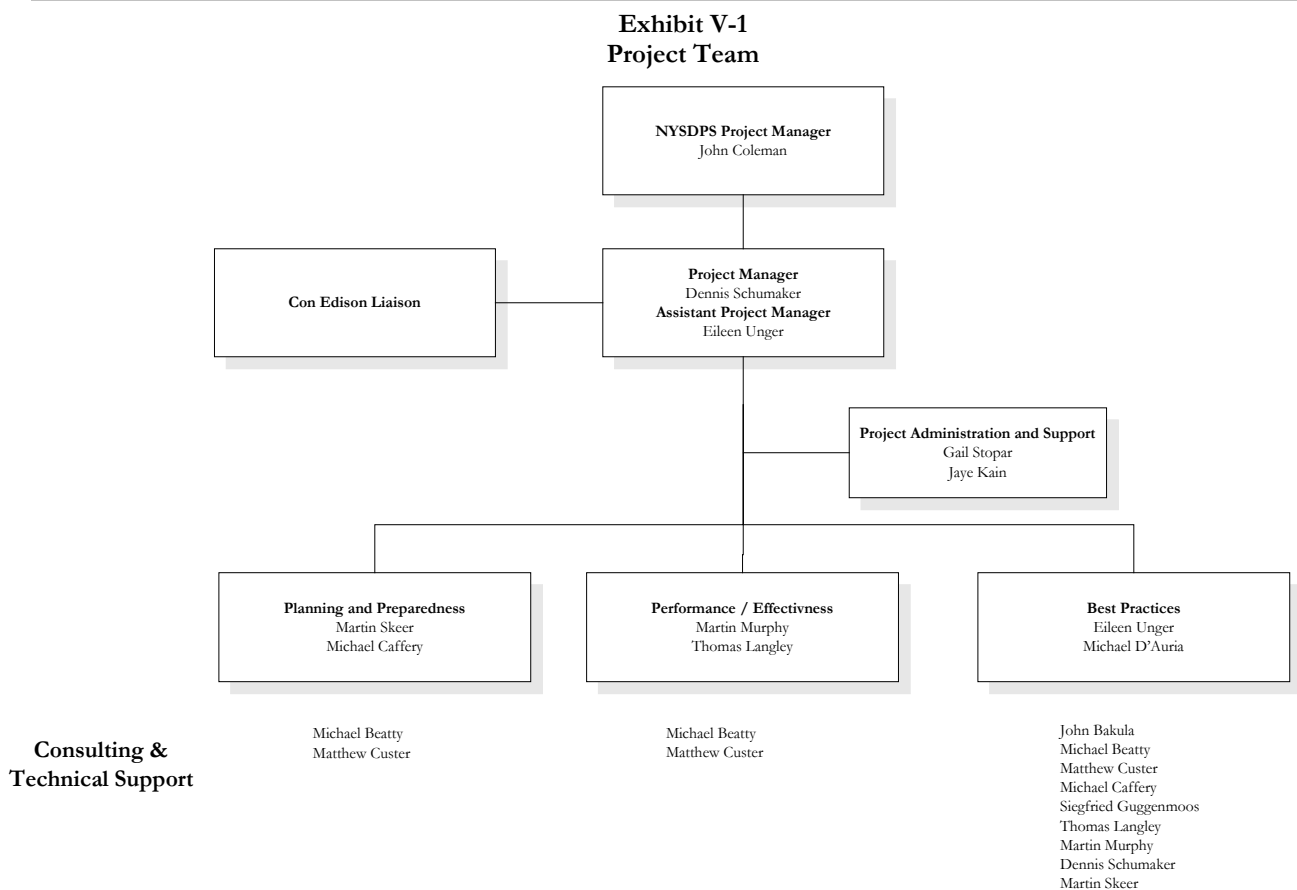
⁸/ The PMI logo is a trademark of the Project Management Institute (PMI) that is registered in the United States and other nations. “PMP” and PMP logo are certification marks of PMI that are registered in the US and other nations.

⁹/ The MCP, MCSE, and MCSD certifications are designations of Microsoft Corporation.

Included in the following text is an explanation of the proposed project team's organization, project management, and our qualifications for this engagement.

C. Project Organization and Staffing

The project team proposed for this assignment, illustrated in *Exhibit V-1*, is composed of selected individuals, whose talents and expertise complement one another, allowing Schumaker & Company to provide a highly skilled and well-rounded team.



The single most important element a consulting firm brings to an assignment is the qualifications of the individual members of the consultant team. Our team has 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 s/he 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, including consultants from Emergency Preparedness Partnerships.



It should be noted that we have proposed a pool of six individuals from EPP and included all of their resumes for your review. However, we intend to use selected consultants from this pool based on the specific requirements of the project (refer to the proposed project team organization chart *Exhibit V-1* for pre-selected personnel). While all of the personnel listed would be available to the project, we would most likely not make use of all of them.

In combination, we respectfully submit that SCHUCO offers the New York Public Service Commission, the New York State Department of Public Service, ConEd, any parties to Case 06-M-1078, and ConEd's customers, a team that is unequalled in relevant experience, capability, and dedication to the completion of a highly successful engagement.

The educational and professional designations of each of the consultants are summarized in *Exhibit V-2*.

**Exhibit V-2
Consultant Team Experience**

Name	Responsibility	Year s Exp.	Education and Professional Designations
Dennis J. Schumaker	Project Manager & Lead Consultant	31	BME (Mechanical Engineering), MS (Nuclear Engineering), MBA (Strategic & Corporate Planning), CMC®, PMP®, MCSE, MCP+I
Eileen K. Unger	Assistant Project Manager & Lead Consultant	26	BS (Civil Engineering), MS (Engineering Management), PE
John Bakula	Senior Consultant	32	BS (Electrical Engineering), MS (Engineering Management)
Michael J. Beatty	Senior Consultant	35	BS
Michael K. Caffrey	Senior Consultant	37	BA, Certified Hurricane Planner
Matt Custer	Senior Consultant	34	BA, MA (Public Communications)
Michael M. D'Auria	Senior Consultant	35	Certified Incident Command Trainer, FEMA and EMI certified
Siegfried Guggenmoos	Senior Consultant	30	BS (Agriculture-Horticulture, post-graduate work, CPC
Thomas W. Langley	Senior Consultant	30	BS (Mechanical Engineering), PE
Martin Murphy	Lead Consultant	29	BCE (Engineering), MS (Engineering), MBA, PE
Martin H. Skeer	Senior Consultant	20	PhD and MS (Engineering Mechanics), BA (Finance), BS (Civil Engineering)

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 New York State Department of Public Service (NYSPDS) before engaging those resources on the project. Over 40 different professional staff are employed or affiliated with Schumaker & Company.

D. Project Management

In the overall staffing plan, key determinants of success include top level visibility and effective project management. These are particularly essential for a project as complex as this engagement. To accomplish both of these ends, we plan to assign Dennis J. Schumaker of SCHUCO as the *Project Manager* with Eileen Unger of EPP as the *Assistant Project Manager*. Mr. Schumaker will be the primary contact with the client and will be personally responsible for the quality of the work and the successful completion of the entire project. Both Mr. Schumaker and Ms. Unger will partner to provide day-to-day leadership. 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.

The Project Manager – Mr. Dennis J. Schumaker

Mr. Schumaker is a *Project Management Professional (PMP®)*, a *Certified Management Consultant (CMC®)*, and previously served as the *Engagement Manager* or *Project Manager* on audits of PECO Electric Company, AEP Kentucky, Elizabethtown Gas Company (NUI Corporation), New Jersey Natural Gas Company (New Jersey Resources Corporation), South Jersey Gas Company (South Jersey Industries Corporation), Western Kentucky Gas Company, Philadelphia Gas Works, Union Light Heat & Power Company, Middleborough Gas & Electric, Peoples Natural Gas Company, Kingsport Power Company, Pennsylvania Power & Light Company, West Texas Utilities Company, Philadelphia Suburban Water Company, General Waterworks Corporation of Pine Bluff, Kentucky-American Water Company, US WEST, City of Sturgis, City of Niles, Entergy, Conectiv, Jersey Central Power and Light Company/GPU Energy, Public Service Electric & Gas Company, Rockland Electric Company, SBC Ameritech Indiana, US WEST, Verizon New York, and others, such as a customer satisfaction survey project for the Illinois Commerce Commission. Additionally, he has performed numerous other audits, including Southern California Gas Company, ALLTEL Pennsylvania, Commonwealth Telephone Company, Central Maine Power Company, United Water New Jersey, Illinois Bell Telephone Company, Pennsylvania Gas & Water Company (PG Energy), Verizon PA, and others.

The Assistant Project Manager – Ms. Eileen Unger

Ms. Unger has over 26 years of experience in the engineering, construction, and utility industries. Prior to co-founding EPP, Eileen spent 16 years with Conectiv, a Fortune 500 electric and gas utility based in Wilmington, Delaware, in a variety of capacities. There she had managerial responsibility for Business Development, Market Support, Major Accounts, and Customer Service and Sales. Prior to joining Atlantic Electric/Conectiv, Eileen worked for Bechtel Construction Co. at the Hope Creek Nuclear Generating Station where she designed emergency response simulations, developed standard operating procedures, and handled planning and scheduling. Prior to that, she worked for United Engineers and Constructors at a chemical plant undergoing an extensive renovation. Ms. Unger has consulted on

numerous electric utility projects similar to this, including a Corporate Storm Readiness Program, an assessment of an Electric System Emergency Restoration Plan, a Business Continuity Plan Review, and an audit of the physical security of a company's critical assets.

E. Proposed Staff Resumes

The following resumes highlight the recent, relevant professional experience of our proposed consultants for this specific assignment with the NYSDPS and ConEd. 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/her responsibilities for this assignment.

Mr. Dennis J. Schumaker, CMC[®], PMP[®], MCSE, MCSA, MCP+I Project Manager & Lead 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 degree in Nuclear Engineering from Ohio State University and an MBA from the University of Michigan. He is a:

- ◆ *Certified Management Consultant (CMC[®])*
- ◆ *Project Management Professional (PMP[®])*
- ◆ *Microsoft Certified Systems Engineer (MCSE)*
- ◆ *Microsoft Certified Systems Administrator (MCSA)*
- ◆ *Microsoft Certified Professional+ Internet (MCP+I).*

CONSULTING EXPERTISE

Mr. Schumaker's professional experience includes the following types of assignments:

- ◆ 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



**Mr. Dennis J. Schumaker, CMC[®], PMP[®], MCSE, MCSA, MCP+I, continued
Project Manager & Lead Consultant**

**UTILITY
MANAGEMENT
& OPERATIONS
AUDIT
EXPERIENCE**

He has been an *Engagement Manager, Project Manager, Lead Consultant, or Technical Consultant* on more than 50 management and operations reviews over the last 15 years and has testified before five regulatory commissions during the last nine years. His specific experience in the electric, gas, water, and telecommunications industries includes assignments at over 50 different electric, water, or gas utilities. Electric utilities include: Central Maine Power Company, City of Niles (MI) Utilities Department, Conectiv, Entergy, Jersey Central Power and Light Company/GPU Energy Kingsport Power Company (AEP), Middleborough (MA) Gas & Electric Department, Pacific Gas & Electric Company, PECO Energy, Pennsylvania Power & Light Company, Public Service Electric & Gas Company, Rockland Electric Company, Southern California Gas Company, Union Light Heat and Power Company, West Texas Utilities Company (Central & Southwest Corporation), City of Sturgis (Michigan) Electric Department, and others. Gas utilities include: Elizabethtown Gas Company (NUI Corporation), Middleborough (MA) Gas & Electric Department, New Jersey Natural Gas Company (New Jersey Resources Corporation), Pacific Gas & Electric Company, Pennsylvania Gas & Water Company (PG Energy), PECO Energy, Peoples Natural Gas Company, Philadelphia Gas Works, South Jersey Gas Company (South Jersey Industries Corporation), Western Kentucky Gas Company (Atmos), and others. Water utilities include: City of Niles (MI) Utilities Department, Kentucky-American Water Company (American Water Works), Pennsylvania Gas & Water Company (PG Energy), Philadelphia Suburban Water Company (Philadelphia Suburban Corporation), United Water New Jersey (United Water Resources), Water Services Corporation of South Carolina, and others. Telecommunications companies include: ALLTEL Pennsylvania, Commonwealth Telephone Company, Illinois Bell Telephone Company (SBC/Ameritech), New England Telephone Company (Verizon), SBC Ameritech Indiana, US WEST, Verizon NY, and Verizon PA.

His management audit work has focused on management and operations assessments and performance reviews, business restructuring and 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.

**Mr. Dennis J. Schumaker, CMC[®], PMP[®], MCSE, MCSA, MCP+I, continued
Project Manager & Lead Consultant**

**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 to a business or government entity's internal operations. He is a member of the Project Management Institute (PMI) and has also been a presenter at a national PMI meeting, where he presented the application of PMI methodologies, titled *A Dose of One's Own Medicine*, involving a large utility client providing services in various states. He is also a member of the mid-western Microsoft Project Users Group.

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. Mr. Schumaker has implemented project management systems (mainframe and minicomputer-based systems) on assignments ranging from large multi-billion dollar consulting projects to smaller ongoing software development projects. Project management software systems used include APECS, Project 2, Artemis, Workbench, Primavera, @Risk, and Microsoft Project.

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.

**PROJECT
MANAGEMENT
SYSTEMS AND TOOLS**

Microsoft Project, APECS, Project 2, Artemis, Workbench, Primavera, @Risk for Project.

**SOFTWARE
APPLICATIONS**

All Microsoft Office applications, including Word, Excel, PowerPoint, Access, Project, and Microsoft Back Office products, including Exchange Server (5.5 & 2000), Internet Information Server (4.0 & 5.0), SQL Server (2000), Internet Security and Acceleration Server (ISA), and Systems Management Server (SMS).



Mr. Dennis J. Schumaker, CMC[®], PMP[®], MCSE, MCSA, MCP+I, continued
Project Manager & Lead Consultant

**UTILITY
COMMISSION
EXPERIENCE**

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

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

**Mr. Dennis J. Schumaker, CMC[®], PMP[®], MCSE, MCSA, MCP+I, continued
Project Manager & Lead Consultant**

Some of Mr. Schumaker's utility and telecommunications assignments over the last ten years are listed below:

Electric Utilities

AEP/Kentucky	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	Kingsport Power Company	Sunflower Electric Cooperative
City of Niles Utilities Department	Long Island Lighting Company	Tennessee Valley Authority
Columbus Southern Power Company	Michigan South Central Power Agency	Toledo Edison Company
Conectiv	Nebraska Public Power District	Union Electric Company
Consumers Power Company	New Orleans Public Service	Union, Light Heat and Power Company
Dayton Power and Light Company	Niagara Mohawk Power Company	United Power Cooperative
Detroit Edison	Ohio Power Company	West Texas Utilities Company
Entergy	Pacific Gas & Electric Company	Wisconsin Electric Power Company
Florida Power and Light Company	PECO Energy Company	
General Public Utilities	Pennsylvania Power & Light Company	

Gas Utilities

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

Water Utilities

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

Telecommunications Companies

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

Representative projects are included on the following pages.



Mr. Dennis J. Schumaker, CMC®, PMP®, MCSE, MCSA, MCP+I, continued
Project Manager & Lead Consultant

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, 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.

PECO Energy Company

Project Manager and Lead Consultant

- ◆ Project planning and scheduling for diagnostic review of functional areas and in-depth analyses of pre-identified issues
- ◆ Data and statistics research and benchmarking analysis
- ◆ Executive management
- ◆ Electric/gas operations/reliability
- ◆ Corporate governance
- ◆ Customer service
- ◆ Shareholder proposals
- ◆ Merger agreement review

Performed a stratified management and operations audit of Pennsylvania 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 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.

Mr. Dennis J. Schumaker, CMC[®], PMP[®], MCSE, MCSA, MCP+I, continued
Project Manager & Lead Consultant

Verizon New York

Project Manager

- ◆ Organization and management
- ◆ Capital and maintenance planning
- ◆ Customer services and field operations
- ◆ Performance analysis and statistics
- ◆ Best practice comparisons

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.

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.



Mr. Dennis J. Schumaker, CMC[®], PMP[®], MCSE, MCSA, MCP+I, continued
Project Manager & Lead Consultant

New Jersey Board of Public Utilities

Newark, New Jersey

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.

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.

Mr. Dennis J. Schumaker, CMC[®], PMP[®], MCSE, MCSA, MCP+I, continued
Project Manager & Lead Consultant

Middleborough Gas & Electric Department
Middleborough, Massachusetts

Project Manager and Senior Consultant

- ◆ Competitive assessment/benchmarking
- ◆ Management and operations review
- ◆ Communication with utility board
- ◆ Electric operations and distribution

Performed a competitive assessment of this municipal gas and electric department, 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.

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 decommissioning; 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).

West Texas Utilities Company

Engagement/Project Manager and Lead Consultant

- ◆ Executive management and organization
- ◆ Electric operations
- ◆ Power generation

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.



Mr. Dennis J. Schumaker, CMC[®], PMP[®], MCSE, MCSA, MCP+I, continued
Project Manager & Lead Consultant

Western Kentucky Gas Company

Engagement/Project Manager and Lead Consultant

- ◆ Executive management and organization
- ◆ Gas operations
- ◆ Affiliated relationships and transactions

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.

Union Light, Heat and Power Company

Engagement/Project Manager and Lead Consultant

- ◆ Organization and management
- ◆ Electric and gas operations
- ◆ Strategic and corporate planning
- ◆ Legal services

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.

Philadelphia Gas Works

Project Manager and Lead Consultant

- ◆ Executive management and organization
- ◆ Gas operations
- ◆ Customer services and customer relations

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.

The Electricity Supply Board of Ireland

Lead Consultant

- ◆ Fossil fuel procurement
- ◆ System dispatch and power purchase
- ◆ Power plant performance

Performed a focused management and operations that reviewed an examination of electric generation activities. It encompassed fossil (peat, oil, natural gas, and coal) generation and hydro generation in the three generating regions of ESB. Assessed fossil fuel procurement, system dispatch and purchase power, and power plant performance.

**Mr. Dennis J. Schumaker, CMC[®], PMP[®], MCSE, MCSA, MCP+I, continued
Project Manager & Lead Consultant**

<i>Georgia Power Company</i>	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).
<i>Lead Consultant</i>	
<ul style="list-style-type: none"> ◆ Field station organization ◆ Operations and maintenance ◆ Power generation 	
<i>Nebraska Public Power District</i>	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.
<i>Lead Consultant</i>	
<ul style="list-style-type: none"> ◆ Engineering and construction ◆ Transmission and distribution 	
<i>Columbus Southern Power Company</i>	Performed a focused management and operations review of electric transmission and distribution as well as engineering and construction.
<i>Lead Consultant</i>	
<ul style="list-style-type: none"> ◆ Engineering and construction ◆ Transmission and distribution 	
<i>New Orleans Public Service Corporation</i>	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.
<i>Lead Consultant</i>	
<ul style="list-style-type: none"> ◆ Fossil generation ◆ Transmission and distribution operations and maintenance 	



Ms. Eileen K. Unger, PE
Founding Partner, Emergency Preparedness Partnerships
Assistant Project Manager and Lead Consultant

EXPERIENCE

Ms. Eileen Unger has over 26 years of experience in the engineering, construction and utility industries. Prior to co-founding EPP, Eileen spent 16 years with Conectiv, a Fortune 500 electric and gas utility based in Wilmington, Delaware, in a variety of capacities. There she had managerial responsibility for Business Development, Market Support, Major Accounts and Customer Service and Sales.

While she was with Conectiv Solutions, a non-regulated subsidiary of Conectiv, she was responsible for conducting and developing the company's Y2K vulnerability analysis and preparedness plan - ensuring that both systems and business processes would be uninterrupted. Ms. Unger oversaw the development of Standard Operating Procedures and documented business processes. She acted as an observer and evaluator during company-wide exercises, and had responsibility for the development and maintenance of the regional emergency restoration plan which comprised over 500,000 customers. She managed the communication and coordination between company personnel and the municipalities within the eight-county region, and was accountable for the deployment of personnel to county Offices of Emergency Management during critical events. Eileen was also a representative to the Corporate Restoration Center.

Prior to joining Atlantic Electric/Conectiv, Ms. Unger worked for Bechtel Construction Co. at the Hope Creek Nuclear Generating Station where she designed emergency response simulations, developed standard operating procedures, and handled planning and scheduling. Prior to that she worked for United Engineers and Constructors at a chemical plant undergoing an extensive renovation.

EDUCATION & CERTIFICATIONS

- ◆ B.S. – Rutgers University, College of Engineering
- ◆ M.S. – New Jersey Institute of Technology
- ◆ Licensed Professional Engineer – New Jersey

CONSULTING EXPERTISE

- ◆ Emergency preparedness
- ◆ Storm restoration plan development, review, and audit
- ◆ Exercises/drills
- ◆ Security plan audits
- ◆ Training



Ms. Eileen K. Unger, PE, continued
Assistant Project Manager and Lead Consultant

**ELECTRIC
UTILITY
CONSULTING
EXPERIENCE**

Ms. Unger has been a consultant on numerous projects. Relevant experience for this project includes:

- ◆ Corporate Storm Readiness Program
- ◆ Assessment of an Electric System Emergency Restoration Plan
- ◆ Business Continuity Plan Review
- ◆ Audit of the physical security of the company's critical assets

**AWARDS AND
RECOGNITION**

- ◆ 2006 Women of Distinction, Philadelphia Business Journal
- ◆ 2006 Wells Fargo Trailblazer Award
- ◆ 2005 Women of Distinction, NJ Biz Magazine
- ◆ 2004 Person to Watch, SJ Magazine

**PROFESSIONAL
AFFILIATIONS**

- ◆ Executive Director, New Jersey Emergency Preparedness Association
- ◆ New Jersey Utilities Association
- ◆ New Jersey State Industrial Safety Committee
- ◆ American Society for Industrial Security
- ◆ Contingency Planning Exchange
- ◆ Board Member, National Association of Women Business Owners

Mr. John Bakula

Senior Consultant

BACKGROUND

Mr. John Bakula has 32 years of business and industry experience with both private and public sector clients. Prior to performing management consulting work, Mr. Bakula accumulated over 30 years of experience in the customer services and distribution operations and maintenance areas of Commonwealth Edison. During that time he was responsible for various aspects of customer services, including call center interface, meter and billing, distribution operations and maintenance, including emergency storm restoration and ongoing distribution operations and maintenance activities.

EDUCATION & CERTIFICATIONS

Mr. Bakula holds a Masters in Engineering Management from Midwest College of Engineering and a BS in Electrical Engineering from the University of Missouri at Rolla.

PROFESSIONAL AFFILIATIONS AND CERTIFICATIONS

- ◆ Institute of Management Consultants (IMC)
- ◆ International Utility Revenue Protection Association (IURPA)
- ◆ Chairman of Strategic Metering Issues Working Group (1998 – 1999)
- ◆ Edison Electric Institute (EEI) Distribution Committee
- ◆ Association of Edison Illuminating Companies (AEIC) Meter and Service Committee

REPRESENTATIVE MANAGEMENT CONSULTING EXPERIENCE

- ◆ Developed recommendations to improve capacitor program at Commonwealth Edison.
- ◆ Developed procurement plan for industrial customer to find new energy supplier.
- ◆ Performed assessment and provided a list of improvements for Kansas City Power & Light's metering area.
- ◆ Also worked on a reliability project at Potomac Electric Power Co., where he provided an assessment of PEPCo's expenditure prioritization process and provided new methodology for prioritizing distribution expenditures for reliability work.



Mr. John Bakula, continued
Senior Consultant

**INTEGRATION
MANAGER
EXPERIENCE**

Directed group responsible for benchmarking, operating measurements, process improvements, and data acquisition from the customer information system for 3.4 million customers.

- ◆ Identified gaps between the existing Meter Reading Department and industry leaders and created plans, timelines, recommendations and directed a team that shaped a new Meter Reading Department; senior executives, including company president, approved project plans
- ◆ Led a team that revamped the Maintenance & Construction Department, identifying and correcting problems associated with previous organization; company president approved implementation plans
- ◆ Led team for implementation of mobile data to 400 field meter personnel

**FIELD & METER
SERVICES
MANAGER
EXPERIENCE**

Responsible for Meter Service Department and all field meter activities, involving 490 employees, \$27 million expense budget, and \$18 million investment budget.

- ◆ Served as Committee Chairman for Strategic Metering Working Group of the Edison Electric Institute
- ◆ Reorganized department with a 25% (\$.75 M savings) reduction in department heads, while improving all key performance measures over the previous year
- ◆ Replaced two major computer systems, the automatic meter reading and inventory computer systems, on time and on budget to meet Y2k compliance without impacting customers

**METER SERVICES
MANAGER
EXPERIENCE**

Responsible for all revenue metering strategies, policies, meter inventory, meter shop, engineering design, installation, automatic meter reading system, theft of service program, independent power producers, and inter-utility metering.

- ◆ Directed improvements that accomplished a 30% labor reduction, while improving all inventory performance measures without any union grievances
- ◆ Facilitated five-day culture change workshops for all distribution company department heads and administrators; performed follow-up survey of management showed a clear change in management employee satisfaction
- ◆ Proposed and implemented a reorganization that eliminated billing problems for largest revenue customer metering installations with a 20% labor reduction without any union grievances

Mr. John Bakula, continued
Senior Consultant

**METER SERVICES
MANAGER
EXPERIENCE
(CONTINUED)**

- ◆ Reorganized field dispatching operations reducing labor requirements by over 50% (\$.5M savings) at the same time standardizing customer contact process across the company
- ◆ Acted as an expert witness for metering and billing before the Illinois Commerce Commission (ICC) concerning billing experiment, where ICC successfully ruled for the company's billing experiment

**SECTION
ENGINEER
EXPERIENCE**

Directed group that was responsible for distribution standards and specifications for electrical distribution system.

**SUPPORT SERVICES
MANAGER
EXPERIENCE**

Managed departments at T & D Northern Division and was responsible for:

- ◆ Tree trimming/landscaping
- ◆ Transportation
- ◆ Stores
- ◆ Training (overhead, underground, and substation)
- ◆ Safety and industrial hygiene
- ◆ Distribution contracting overhead, URD, trenching, and underground
- ◆ Assisted the Northern Division Operating Manager in managing Construction, Engineering, and Testing departments

Established contracting operations for the company where no contracting had been performed enabling completion of many key projects. Developed contractor work specifications, contract inspector organization and administered contracts for overhead, underground, trenching, and service contractors.

**PROFESSIONAL
PLACEMENT
EXPERIENCE**

As *Corporate Lead* of professional placement services, Mr. Bakula was responsible for the company's professional placement and college recruitment.

**DEPARTMENT
HEAD, SUPERVISOR
EXPERIENCE**

Various engineering assignments in Chicago and suburban offices in electrical distribution design and planning for 4KV, 12KV, and 34KV, including:

- ◆ Responsible for analyzing customer tickets and issuing trouble tickets during storm restoration
- ◆ Responsible for initiating idea for computer-based sorting of customer tickets during storm restoration replacing manual customer ticket sorting.

Mr. Michael J. Beatty

Senior Consultant, Emergency Preparedness Partnerships

EXPERIENCE

Mr. Michael Beatty has over 35 years of experience in the electric and gas utility fields. Prior to joining EPP, Mike worked for Pepco Holdings, Inc. where he had responsibility for the overall capital budget for PHI Utility Operations, as well as project management responsibilities for three 500kv and 230kv projects. Prior to that he served as the Safety and Environmental Strategic Business Partner, linking the enterprise line of business with safety and compliance issues. Mr. Beatty was also the Human Resource Strategic Business Partner for the Conectiv transition process representing Delivery, Supply Chain, Corporate Services, and Safety & Environmental Mega Processes.

During his entire career with the utility, he was a Storm Restoration Coordinator, with responsibility for plan development, review and compliance. During significant storm events, Mr. Beatty was a member of the Corporate Storm Team, and worked many major storm restoration events, including Hurricane Isabel. Mr. Beatty was heavily involved in the development of the corporate storm restoration process, and designed and participated in a number of exercises and drills.

Mr. Beatty started his career in the Electrical Substation Construction and Maintenance area, and this included supervision of the Stores Area and Field Engineers. He spent several years as the construction manager of a 230kv tower line and has experience as a Substation Field Engineer, assisting crews in construction and maintenance work.

EDUCATION & CERTIFICATIONS

- ◆ B.S. Villanova University

CONSULTING EXPERTISE

- ◆ Emergency preparedness
- ◆ Storm restoration plan development, review and audit
- ◆ Exercises/drills
- ◆ Training
- ◆ Project management
- ◆ Budgeting
- ◆ Substation construction and maintenance



Mr. Michael J. Beatty, continued
Senior Consultant

**ELECTRIC
UTILITY
CONSULTING
EXPERIENCE**

Mr. Beatty has been a consultant on one electric utility project. Relevant experience for this project:

- ◆ Corporate Storm Readiness Program

**PROFESSIONAL
AFFILIATIONS**

- ◆ Vice Chairman, AHOME, Inc. (Affordable Housing).

Mr. Michael K. Caffrey

Senior Consultant, Emergency Preparedness Partnerships

EXPERIENCE

Mr. Michael Caffrey has been in the utility business for 37 years, and has held positions in a variety of functions including Emergency Preparedness, Restoration Manager, Operations, Labor Relations, and Project Management. Prior to joining EPP, Mr. Caffrey was the Manager of Emergency Preparedness for PHI, with the responsibility for over 1 million electric and 115,000 gas customers in Delaware, Maryland, New Jersey, and Virginia.

His responsibilities included overseeing the safe and efficient restoration of PHI's customers in times of emergencies, liaison with state and local emergency management agencies, and he was the lead for the Edison Electric Institute (EEI), Mid-Atlantic Mutual Assistance (MAMA), and Southeastern Electric Exchange (SEE) mutual assistance groups. Mr. Caffrey has functioned as the Operations and Security Lead to the NJBPU Electric and Gas Working Group. He was also responsible for the development and maintenance of corporate crisis management, emergency preparedness, restoration and security plans and processes.

Mr. Caffrey was the PHI Incident Commander during the 2005 hurricane season, when resources were deployed to assist utility companies in Mississippi. He was responsible for interfacing with the local utility and managing the damage assessment and line personnel on site.

Mr. Caffrey has been a presenter at numerous organizations and conferences: New Jersey Emergency Preparedness Conference, MAMA, SEE, EEI, New York Mutual Assistance Group (NYMAG), Western Energy Institute (WEI), State of Maryland, State of Delaware, and the State of New Jersey. Mr. Caffrey has also consulted with other private corporations that were in the process of developing their own emergency preparedness processes and plans.

EDUCATION & CERTIFICATIONS

- ◆ B.A. Thomas Edison College
- ◆ Wide variety of emergency management seminars: Incident Command, Managing an Emergency Management Center, etc. and has attended courses at the National Emergency Training Center in Emmitsburg, Maryland.
- ◆ Certified Hurricane Planner



Mr. Michael K. Caffrey, continued
Senior Consultant

**CONSULTING
EXPERTISE**

- ◆ Emergency preparedness
- ◆ Storm restoration plan development, review, and audit
- ◆ Exercises/drills
- ◆ Training
- ◆ Security audits
- ◆ Operations management
- ◆ Management of storm restoration events

**ELECTRIC
UTILITY
CONSULTING
EXPERIENCE**

Mr. Caffrey has been a consultant on numerous projects. Relevant experience for this project includes:

- ◆ Corporate Storm Readiness Program
- ◆ Assessment of an Electric System Emergency Restoration Plan
- ◆ Business Continuity Plan Review
- ◆ Audit of the physical security of the company's critical assets

**PROFESSIONAL
AFFILIATIONS**

- ◆ Mid-Atlantic Mutual Assistance
- ◆ Southeastern Electric Exchange Mutual Assistance Group
- ◆ Board of Directors of the Atlantic/Cumberland Chapter of the Red Cross
- ◆ Vice President of the New Jersey Emergency Management Association
- ◆ New Jersey Utilities Association

Mr. Matthew Custer

Senior Consultant, Emergency Preparedness Partnerships

EXPERIENCE

Mr. Matthew Custer has over 34 years experience in the communications and utility field. Prior to co-founding Emergency Preparedness Partnerships, Mr. Custer spent 23 years in the electric utility business successfully planning for and managing a variety of business crises and emergencies. He worked for Conectiv, a Fortune 500 electric and gas utility based in Wilmington, Delaware. Mr. Custer is also a process improvement facilitator for Maritz Learning, part of Maritz, Inc., an international firm specializing in marketing research and performance improvement.

As Manager of Public Relations, he led the development of corporate communications resources and processes to restore the company's credibility after the energy crises of the 1970's. He established new methods and procedures to more successfully meet both internal and external communications needs during severe storms and outages. And he was responsible for coordinating the company's communications responsibilities during nuclear emergency exercises. Mr. Custer has also assisted with writing emergency scenarios, administering emergency operations exercises and providing observation/evaluation feedback.

Mr. Custer was later called upon to help Conectiv Energy meet a critical process re-engineering challenge, and served with Conectiv's customer service unit as a special representative during a public relations crisis caused by the release of erroneous electric and gas bills to thousands of customers.

Prior to joining Atlantic Electric/Conectiv, Mr. Custer was the Director of Public Relations for the American Lung Association where he worked with multiple state and city agencies to design and implement the first multi-state air quality index reporting system in the Northeast.

EDUCATION & CERTIFICATIONS

- ◆ B.A. West Chester University, PA
- ◆ M.A. Public Communications, Syracuse University



Mr. Matthew Custer, continued
Senior Consultant

**CONSULTING
EXPERTISE**

- ◆ Emergency preparedness
- ◆ Storm restoration plan development, review and audit
- ◆ Exercises/drills
- ◆ Emergency preparedness
- ◆ Security plan audits
- ◆ Facilitation
- ◆ Training
- ◆ Business process re-engineering and quality improvement program development
- ◆ Strategic and operations planning
- ◆ Performance measurement development

**ELECTRIC
UTILITY
CONSULTING
EXPERIENCE**

Mr. Custer has been a consultant on numerous projects. Relevant experience for this project includes:

- ◆ Corporate Storm Readiness Program
- ◆ Assessment of an Electric System Emergency Restoration Plan
- ◆ Business Continuity Plan Review
- ◆ Audit of the physical security of the company's critical assets

**PROFESSIONAL
AFFILIATIONS**

- ◆ American Society for Quality
- ◆ International Association of Facilitators
- ◆ Adjunct Professor at the Richard Stockton College of NJ
- ◆ Special Instructor Rutgers University Continuing Education Department
- ◆ New Jersey Emergency Preparedness Association
- ◆ American Society for Industrial Security
- ◆ New Jersey Utilities Association

Mr. Michael M. D'Auria

Senior Consultant, Emergency Preparedness Partnerships

EXPERIENCE

Mr. D'Auria has 35 years of experience in the electric and gas utility industry. Prior to joining EPP, Mr. D'Auria spent his career with Orange and Rockland Utilities, a subsidiary of Con Edison. There he had managerial responsibility for Systems Distribution, Restoration, and Emergency Preparedness. Michael developed and maintained effective and comprehensive security, energy and corporate operating response and recovery plans, and ensured full integration of the plans throughout the Company. He also led the company's Y2K initiative.

Mr. D'Auria established and maintained effective liaisons with municipal emergency preparedness officials, law enforcement agencies, emergency services providers, utility mutual aid coordinators, and elected, as well as appointed, municipal officials. He developed, facilitated, and coordinated corporate and functional area drills and exercises. Mr. D'Auria created, maintained and analyzed work and manpower planning models for staffing of critical incidents; tracked and audited incident expenditures; researched and analyzed significant expenses and variances attendant with emergency preparedness and response. Mr. D'Auria acted as the Incident Commander under ICS protocols and supervised incident response and recovery operations during major events.

Immediately following the September 11, 2001 attacks, Mr. D'Auria undertook a major role in the company's security and counter terrorism initiative. He developed and implemented a comprehensive vulnerability study of the corporation's assets and put in place business continuity and response plans for each. He also created a corporate departmental relocation plan. Mr. D'Auria developed a Corporate Threat Alert Matrix that identified individual department's response to each of the five national alert levels.

EDUCATION & CERTIFICATIONS

Mr. D'Auria has received certification as an Incident Command Trainer from the New York State Emergency Management Office (NYSEMO) and the Federal Emergency Management Agency (FEMA) Emergency Management Institute (EMI). He also is certified by FEMA and EMI in a number of emergency management courses.



Mr. Michael M. D'Auria, continued
Senior Consultant

**CONSULTING
EXPERTISE**

- ◆ Emergency preparedness
- ◆ Storm restoration plan development, review and audit
- ◆ Exercises/drills
- ◆ Security audits
- ◆ Distribution control center operations

**ELECTRIC
UTILITY
CONSULTING
EXPERIENCE**

Mr. D'Auria has been a consultant on numerous projects. Relevant experience for this project includes:

- ◆ Corporate Storm Readiness Program
- ◆ Assessment of an Electric System Emergency Restoration Plan
- ◆ Business Continuity Plan Review

**PROFESSIONAL
AFFILIATIONS**

- ◆ New York Mutual Assistance Group
- ◆ Mid-Atlantic Mutual Assistance Group
- ◆ New England Mutual Assistance Committee
- ◆ Sullivan County Disaster Assessment Team
- ◆ Rockland County Emergency Response Team
- ◆ Indian Point Emergency Response Team
- ◆ New York State Public Service Commission Office of Counter Terrorism Task Force
- ◆ New Jersey State Utilities Terrorism Working Group
- ◆ Pennsylvania State Office of Counter Terrorism Task Force
- ◆ New York's Zone 4, Private Sector Security Task Force
- ◆ Passaic County NJ Terrorist Task Force
- ◆ Edison Electric Institute (EEI) Security Working Group
- ◆ New Jersey Emergency Preparedness Association Training Committee

Mr. Siegfried Guggenmoos, B.Sc.(Agr.),P.Ag, CPC
Ecological Solutions Inc.
Senior Consultant

EXPERIENCE

Mr. Siegfried Guggenmoos has over 30 years of business and industry experience with both private and public sector clients, including extensive experience in the electric/gas utility and transportation industries. Mr. Guggenmoos' consulting experience encompasses expertise as a professional agrologist in the vegetation management industry. He is known in the industry for his problem solving, innovation and new interpretations combining technical, environmental and financial domains, as well as for translating ecological, arboricultural principles into action in implementation and communication strategies. He has held research positions at agricultural and horticultural agencies working on herbicides, growth regulators and pesticide residues. Mr. Guggenmoos was *Vice President* and *General Manager* of a national Canadian vegetation management contractor, Ace Vegetation Control Service, Ltd. in Nisku, Alberta, and later went on to become the *Supervising Forester and Senior Consulting Forester* at TransAlta Utilities in Sherwood Park, Alberta. Mr. Guggenmoos is now president and founder of Ecological Solutions Inc. (Ecosync) located in Sherwood Park, Alberta.

EDUCATION & CERTIFICATIONS

Mr. Guggenmoos holds a Bachelor of Science degree in Agriculture, Horticulture major, from the University of Guelph, Guelph, Ontario. He has also completed coursework on the *Fundamentals of Financial Management* through the Northern Alberta Institute of Technology in Edmonton, Alberta, and on *Understanding Finance* at the Banff Centre School of Management in Banff, Alberta.

CONSULTING EXPERTISE

His professional experience includes the following types of assignments:

- ◆ Reviews of vegetation management program quality and effectiveness
- ◆ Long term vegetation management funding review and forecasts
- ◆ Development of vegetation management program alternatives and modifications
- ◆ Development of computer tools for financial assessments of vegetation management program alternatives
- ◆ Development of least cost vegetation management by synchronizing economics and ecology
- ◆ Development of a system of quantification for power line residual tree risk, permitting establishment of targeted, reliability levels based on line priority



Mr. Siegfried Guggenmoos, B.Sc.(Agr.),P.Ag, CPC, continued
Senior Consultant

**CONSULTING
 EXPERTISE,
 CONTINUED**

- ◆ Development of a process for predicting the impact of under funding vegetation management on future reliability and funding requirements
- ◆ Vegetation management and greenhouse gas mitigation measures for a competitive energy market
- ◆ Quantification, monitoring, and verification of biotic greenhouse gas mitigation measures
- ◆ Contributions to development of government policy and regulation

**VEGETATION
 MANAGEMENT
 EXPERIENCE**

Mr. Guggenmoos has been involved in many vegetation management projects. Projects include assessments of the technical quality, contractor compliance with standards, cost effectiveness of vegetation management programs and development of alternative approaches. Methodologies applied include statistical analysis of field observations and development of models forecasting reliability and funding impacts.

Mr. Guggenmoos contributed to the articulation of industry best practices set out in the *Utility Vegetation Management Final Report March 2004* to FERC arising from the investigation of the August 14, 2003 Northeast Blackout.

As part of some the projects Mr. Guggenmoos has managed, he conceptualized an ecological approach to vegetation management for electrical utilities which simultaneously minimizes costs and tree related outages as well as developed a method for determining the optimal clearance between electric lines and trees, a potential cost-saving method for many utilities.

While guiding a project for the Forestry Group of TransAlta, he directed the design and implementation of a record keeping/reporting system that facilitates assessments of site and unit costs, productivity, and future needs, and conceptualized financial interpretation of data arising from TransAlta Forestry reporting system. The financial interpretation subsequently permitted an assessment of the value of program choices, crew configurations, supervision, stability of work force, etc.

His experience in vegetation management also encompasses developing an incentive contract, which shared productivity gains with contractors and their field staff while ensuring safety, quality and customer satisfaction were not jeopardized.

Mr. Guggenmoos has also developed a number of programs that provide quick assessments of the value of current vegetation management practices vs. proposed alternatives as well as computerized templates for tracking budgets, scheduling crews, monitoring reporting accuracy and uniformity.

Mr. Siegfried Guggenmoos, B.Sc.(Agr.),P.Ag, CPC, continued
Senior Consultant

RESEARCH

Mr. Guggenmoos has extensive experience in industry research, and has initiated research in right-of-way ecology and wildlife impacts. He has conducted research into growth rates after brush mowing and tree trimming and continues to conduct research on the effectiveness and develops costs of alternative vegetation management methods and equipment and the efficacy of herbicides, adjuvants, and growth regulators.

**PROFESSIONAL
AFFILIATIONS**

- ◆ Founding Member, Canadian Association of Railroad Applicators
- ◆ Founding Member, Utility Arborist course, Industrial Vegetation Management Association of Alberta
- ◆ Seminar Planning Chairman, Industrial Vegetation Management Association of Alberta
- ◆ Government Liaison Committee, Industrial Vegetation Management Association of Alberta
- ◆ Past Director, Industrial Vegetation Management Association of Alberta
- ◆ Past President, Industrial Vegetation Management Association of Alberta
- ◆ Summarizer, Non-crop brush & weeds, Expert Committee on Weeds, Western Section
- ◆ Member: Alberta Institute of Agrologists, International Society of Arboriculture, Utility Arborist Association, American Consultant's League, Alberta Fish and Game Association

**PRESENTATIONS
& ARTICLES**

- ◆ Brush control. Research Reports, Expert Committee on Weeds, Western Section, 1989, 1990, 1991, 1992,1993
- ◆ Herbicide Trials. IVMAA Reporter, Winter 1987, p37.
- ◆ Economics of Herbicides for Brush Control. 1987. IVMAA Reporter, Winter 1987, p38, Spring 1988, p25.
- ◆ The Canadian Dream. 1988. IVMAA Reporter, Summer 1988, p5, Fall 1988, p4.
- ◆ Evaluating Brush Control. 1988. IVMAA Reporter, Winter 1988, p22.
- ◆ Evaluations Of Three Herbicides For Control And Regrowth Of Poplar. 1988. IVMAA Reporter, Winter 1988, p23.
- ◆ Enhancement of Phenoxy Effects on Brush by Addition of Assist. 1988. IVMAA Reporter, Winter 1988, p25.



Mr. Siegfried Guggenmoos, B.Sc.(Agr.),P.Ag, CPC, continued
Senior Consultant

**PRESENTATIONS
& ARTICLES,
CONTINUED**

- ◆ Presentation to Spring General Meeting of IVMAA. IVMAA Reporter, Winter/Spring 1990, p3.
- ◆ Late Season Foliar Metsulfuron Methyl For Poplar Control. 1990. IVMAA Reporter, Winter/Spring 1990, p35.
- ◆ Enhancement of Phenoxy Effects on Brush by Addition of Assist. 1990. IVMAA Reporter, Winter/Spring 1990, p36.
- ◆ Cattle Grazing as an Alternative to Herbicides. 1990. IVMAA Reporter, Winter 1990, p17.
- ◆ TransAlta Utilities Reporting System-A Management Tool. Journal of Arboriculture, 16(2), 1990.
- ◆ Ecological Aspects of Herbicide Usage on Power Line Rights-of-Way. Journal of Arboriculture, 18(4), 1992
- ◆ Poplar stem and root control comparisons for 2,4-D, diphenprop, dicamba and triclopyr. 1992. IVMAA Reporter, Winter 1992, p16.
- ◆ Effects of water volume variations on triclopyr efficacy. 1992. IVMAA Reporter, Winter 1992, p16.
- ◆ Metsulfuron methyl for poplar spp control. 1992. IVMAA Reporter, Winter 1992, p17.
- ◆ TransAlta compares girdling to triclopyr ester for poplar control. 1995. IVMAA Reporter, Winter 1995, p9.
- ◆ News From TransAlta Utilities. Country Power, Winter 1995, p5.
- ◆ News From TransAlta Utilities. Country Power, Spring 1995, p6.
- ◆ News From TransAlta Utilities. Country Power, Summer 1995, p9.
- ◆ New program controls tree management. Electric Light and Power, 73(2), 1995.
- ◆ Outage Statistics - As a Basis for Determining Line Clearance Program Status. UAA Quarterly, 5(1), Fall 1996.
- ◆ Herbicides, Not a Silver Bullet. UAA Quarterly, 8(4), Summer 2000.
- ◆ Managing Tree-Conductor Conflicts by Risk Assessment. UAA Quarterly, 9(4), Summer 2001
- ◆ Effects of Tree Mortality on Power Line Security. Journal of Arboriculture, 29(4), July 2003.

Mr. Siegfried Guggenmoos, B.Sc.(Agr.),P.Ag, CPC, continued
Senior Consultant

**PRESENTATIONS
& ARTICLES,
CONTINUED**

- ◆ Understand Your Tree Liability. Electric Perspectives, 28(4), 2003
- ◆ Managing Trees to Improve the Bottom Line. IVMAA Reporter, Fall 2003.
- ◆ Managing Trees to Improve the Bottom Line. EnergyPulse, April 2004.
Energy Central Network
http://www.energypulse.net/centers/article/article_display.cfm?a_id=688
- ◆ Tree Management Stops Outages and Improves Profit. Natural Gas & Electricity 21:5 p.10-15, December 2004.
- ◆ Presentations
- ◆ Industrial Vegetation Management Association of Alberta, 2005, 2003, 2001, 1993, 1991
- ◆ International Society of Arboriculture 1989, 1996, 2003
- ◆ Pacific North West Chapter ISA 1991, 2000
- ◆ Western Chapter ISA, 2003
- ◆ EEI Natural Resources Conference, 2003, 2001
- ◆ International Right of Way Association, 2003
- ◆ Western Power Institute, 2000

Representative projects are included on the following pages.

PECO Energy Company

Senior Consultant

- ◆ Vegetation management

Performed a stratified management and operations audit of Pennsylvania Energy Company (PECO) for the Pennsylvania Public Utility Commission (PaPUC) in with the primary focus areas being vegetation management. 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.

AEP/Kentucky

Senior Lead Consultant

- ◆ 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.



Mr. Thomas W. Langley, P.E.

Senior Consultant, Emergency Preparedness Partnerships

EXPERIENCE

Mr. Thomas Langley has over 30 years experience in the utility industry which includes over 20 years as a Corporate Director or Manager. Prior to joining EPP, Mr. Langley worked for Atlantic Electric, Conectiv, and Pepco Holdings Inc., a Fortune 500 electric and gas utility now based in Washington, D.C. There he had Corporate Director responsibility for Electric System Operations, System Planning, Engineering, Field Operations, Emergency Preparedness, Business Process Improvement, Business Renewal, and Change Management. His management experience includes Regulatory, Marketing, Information Technology and Customer Service.

Mr. Langley successfully initiated an Emergency Preparedness training and drill program to prepare leadership and employees for crisis events, and he led Corporate System Operations through multiple crisis/storm events, including hurricanes, ice storms, and emergency load reductions. Mr. Langley led the team that was responsible for preparing the organization and individuals for a new enterprise wide business system (SAP and Work Management), and he directed cross functional teams that successfully delivered business process improvements valued at over \$7 million in one year. He managed more than 400 engineers, union line personnel, and customer service representatives responsible for the design, construction and maintenance of the electric system in southern New Jersey, which comprises over half a million customers.

Mr. Langley was responsible for the creation of a Marketing Department that contributed over \$1 million in revenue in less than 3 years. That department included Market Research, a Major Accounts Sales Team, and a Residential/Builder Sales Team. He was instrumental in the development and execution of a New Market Conference that showcased Southern New Jersey businesses and economic development opportunities; over 300 people attended from 5 countries. Mr. Langley presented extensive testimonies in company rate cases.

During the merger of Atlantic Electric and Delmarva Power, which formed Conectiv, Mr. Langley successfully integrated multiple departments. He also initiated Conectiv's business renewal process of vision, technologies, and long range planning.



Mr. Thomas W. Langley, P.E., continued
Senior Consultant

**EDUCATION &
CERTIFICATIONS**

- ◆ B.S. Mechanical Engineering – Villanova University
- ◆ Graduate studies at Duke University, University of Michigan, University of Idaho, and Drexel University
- ◆ Licensed Professional Engineer – New Jersey

**CONSULTING
EXPERTISE**

- ◆ Emergency preparedness
- ◆ Storm restoration plan development, review and audit
- ◆ Exercises/drills
- ◆ Change management
- ◆ Training
- ◆ Business process re-engineering and quality improvement program development
- ◆ Strategic and operations planning

**ELECTRIC
UTILITY
CONSULTING
EXPERIENCE**

Mr. Langley has been a consultant on numerous projects. Relevant experience for this project includes:

- ◆ Corporate Storm Readiness Program
- ◆ Assessment of an Electric System Emergency Restoration Plan

**PROFESSIONAL
AFFILIATIONS**

- ◆ PJM Operating Committee
- ◆ EEI Rate Research Committee
- ◆ American Society of Mechanical Engineers

Mr. Martin J. Murphy, PE

Lead Consultant

BACKGROUND

Mr. Martin J. Murphy has over 30 years of consulting experience. His background, which includes a blend of experience in operations, engineering, information systems, and management, provides him with a unique perspective from which to perform the required investigations, develop viable findings, and formulate appropriate recommendations for improvement. His utility consulting experience encompasses numerous management and operations audits for commissions and utilities. His assignments have focused on the review of several functional areas, including workforce management; engineering and construction; purchasing and materials management; construction program planning; affiliated interests; transportation; legal services; facilities management; risk management and finance; operational efficiency assessment; project planning and management; organizational analysis; budgeting and cost control; and technical and economic feasibility evaluation.

EDUCATION & CERTIFICATIONS

His educational achievements include a Bachelor's degree in Civil Engineering from Cornell University, a Master's degree in Civil and Environmental Engineering from Cornell University, and an MBA from the University of Chicago.

CONSULTING EXPERIENCE

Mr. Murphy has served as a *Lead Consultant* on numerous management and operations reviews for electric, gas, telephone, and water utilities. He has focused primarily on areas related to operations, engineering, construction, and support services. Several of these reviews also had a particular emphasis on performing reviews of the management of the workforce within the operational units of the companies and formulating recommendations for implementing improvements. Additionally, Mr. Murphy has performed numerous audits that focused on the relationships between utilities and their affiliated interests, especially in reference to the potential for cross-subsidization and compliance with the applicable regulations. In addition, he has a solid working knowledge of the purchasing and materials management, information technology, and support services functions of utilities, having served as *Lead Consultant* for reviews of each of these functions.



Mr. Martin J. Murphy, PE, continued
Lead Consultant

**CONSULTING
EXPERIENCE
(CONTINUED)**

Mr. Murphy also has significant experience and expertise in the area of computer systems implementation and operation. He has reviewed the systems environments at several utilities and commercial operations and formulated recommendations for improvements. Additionally, he has performed requirements definitions for hardware and software systems and assisted in the selection and implementation of the selected system.

**PROFESSIONAL
AFFILIATIONS**

- ◆ *Registered Professional Engineer* (New York, Connecticut, and Illinois)
- ◆ American Production and Inventory Control Society

PRIOR EXPERIENCE

Prior to joining Schumaker & Company, Mr. Murphy was the Director of MIS for Chicago Pneumatic Tool Company, an international manufacturing firm based in Rock Hill, SC. Prior to that he was the President of M.J. Murphy & Company, a management consulting firm serving the utility and manufacturing industries. Before that, Mr. Murphy was a Senior Manager with the Management Consulting Department of KPMG Peat Marwick in Charlotte, North Carolina. Specifically, he served as Manager of their Carolinas Operations Improvement Group. As a Manager at Theodore Barry & Associates he was a member of their Management and Operations Analysis Group located in Cambridge, Massachusetts.

Mr. Murphy's relevant project experience is listed on the following pages.

Mr. Martin J. Murphy, PE, continued
Lead Consultant

Water Services Corporation of South Carolina

Lead Consultant

- ◆ Customer service
- ◆ Water operations
- ◆ Pending litigation
- ◆ 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, 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.

PECO Energy Company

Lead Consultant

- ◆ Electric and gas operations
- ◆ Electric and gas reliability
- ◆ Materials management and stores
- ◆ Fleet management

Performed a stratified management and operations audit of Pennsylvania 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 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.



Mr. Martin J. Murphy, PE, continued
Lead Consultant

Verizon PA

Senior Consultant

- ◆ Network performance metrics review
- ◆ Performance assurance plan review
- ◆ Performance data reporting accuracy review

Performed a review and evaluation of the performance metrics and related remedies of Verizon Pennsylvania, Inc. for the Pennsylvania Public Utilities Commission. Reviewed Verizon's efforts to ensure that measurements are input, captured, and reported on an accurate basis. This included review of the Verizon methods and procedures for the areas of training, implementation of process changes, documentation of the Performance Assurance process steps, and assuring quality handling of CLEC service requests. Concentrated on documenting activities that impacted order processing, maintenance and repair, billing, and collocation requests.

Verizon New York

Senior Consultant

- ◆ Organization and management analysis
- ◆ Capital and maintenance planning
- ◆ Customer services and field operations
- ◆ Performance analysis and statistics
- Best practice comparisons

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.

Mr. Martin J. Murphy, PE, continued
Lead Consultant

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. Reviewed crew scheduling, training, and communications systems for effectiveness. Evaluated field crew staffing levels with relation to the historical work loadings and the amount of overtime being charged. Performed observations and analysis of technician crews in the field and the tools and systems at their disposal. Reviewed dispatch center and storm response procedures and planning. Reviewed design engineering procedures and the engineering and technical standards utilized.

New Jersey Board of Public Utilities

***Jersey Central Power and Light Company
/GPU Energy
Public Service Electric & Gas Company
Rockland Electric Company
Conectiv***

Lead Consultant

- ◆ Work force management
- ◆ Distribution operations
- ◆ Engineering and construction
- ◆ Electric distribution planning

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 Board 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. He worked closely with and at the direction of the BPU Staff in reviewing the implementation of the recommendations.



Mr. Martin J. Murphy, PE, continued
Lead Consultant

***New Jersey Board of Public Utilities
Newark, New Jersey***

***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 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 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.

SBC Ameritech Indiana

Project Manager & Lead Consultant

- ◆ Call center operations
- ◆ Field operations
- ◆ Performance statistics

Performed management and operations analyses of existing practices as part of a focused review of service quality performance and related plans and practices of SBC Ameritech Indiana, including its call center operations and field operations. Performed a historical review of operations to help identify those causal factors that led up to the service problems that were experienced in the year 2000. Performed field reviews of company installation, repair, and construction operations. Reviewed outside plant and central office planning and budgeting programs to assess their ability to provide for proper network facilities to meet future demand. Performed computer-based analyses of a wide range of available performance statistics to determine how well specific geographical service areas were performing in relation to the norm for Ameritech Indiana.

Kingsport Power Company

Lead Consultant

- ◆ Operations
- ◆ Workforce management
- ◆ Engineering and construction
- ◆ Procurement and materials management
- ◆ Transportation management

Performed a comprehensive management and operations review in which his primary responsibilities included evaluating the operations/engineering and construction function and various support services, including reviews of the workforce management function. Developed recommendations pertaining to implementation of improved computer systems for materials management and transportation management. Recommended enhancements to maintenance and construction work estimating and monitoring system.

Mr. Martin J. Murphy, PE, continued
Lead Consultant

West Texas Utilities Company

Lead Consultant

- ◆ Purchasing
- ◆ Materials management
- ◆ Transportation management

Performed a comprehensive management and operations review in which his responsibilities included evaluating the purchasing, materials management, and transportation functions. Focused on the effective monitoring and control of inventory levels through the implementation and utilization of an integrated purchasing and inventory control software package. Enhanced WTU's ability to take economic advantage of its volume purchasing power by more effective centralization of the purchasing process.

Illinois Power Company

Lead Consultant

- ◆ Construction management
- ◆ Engineering

Conducted a commission-mandated, retrospective review of the pre-operations testing and start-up functions of Clinton Nuclear Power Station. This study focused on the effectiveness of the organizational, strategic, and procedural aspects of the testing and start-up programs. Analyzed the critical interface between the project construction forces and the start-up team.

Commonwealth Edison

Lead Consultant

- ◆ Construction management
- ◆ Engineering

Performed a commission-mandated, retrospective review of the construction management at the Byron and Braidwood Nuclear Power Plants. The study included an in-depth review of all elements of the construction management program, including project controls and scheduling, materials procurement and warehousing, equipment procurement and management, management organization and staffing, contractor selection and management, materials and equipment management, and executive involvement.



Mr. Martin H. Skeer, Ph.D., CMC

Senior Consultant

EXPERIENCE

Dr. Skeer has more than 19 years of management consulting experience serving utilities, regulatory agencies, municipal governments and major corporations. He has participated as a *Project Manager*, *Technical Advisor*, or *Lead Consultant* in numerous energy and telecommunications industry engagements. His areas of consulting experience include operations and network planning; corporate, strategic, and financial planning; market analysis; operations support systems; and performance measurement.

Dr. Skeer has served as *Lead Consultant* for Commission ordered audits and business process reviews of many major energy and telecommunications companies.

- ◆ Electric and gas utilities include: Potomac Gas & Electric Company; Public Service Electric & Gas Company, Long Island Power Authority, Central Hudson Gas and Electric Company; Chelan (WA) Public Utility District; Truckee-Donner (CA) Public Utility District, Transmission Agency of Northern California, Florida Municipal Power Agency and others.
- ◆ Telecommunications carriers, include Bell Atlantic and NYNEX (before they merged), Sprint-United, Contel (before it merged with General Telephone), General Telephone (GTE – before it merged with Bell Atlantic and became Verizon), Verizon, Qwest, and numerous Independent Telephone Companies.

Dr. Skeer has actively participated in functional analyses and operational reviews for these companies. Among other relevant engagements, he supported Doherty & Company, Inc.'s (DCI's) efforts regarding Qwest Communications Section 271 proceedings in Colorado and Arizona, including resolution of Statement of General Terms and Conditions (SGAT) issues, and preparation of the Arizona Corporate Commission Final report on Operations Support Systems.

Dr. Skeer supported Schumaker & Company in the analysis, documentation, and verification, of 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) in the context of NY telephone service standards, and that Company guidelines meet applicable service quality performance standards, including reasonably foreseeable events and contingencies. He 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.



Mr. Martin H. Skeer, Ph.D., CMC, continued
Senior Consultant

**EXPERIENCE,
CONTINUED**

He 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.

Before entering the consulting profession, Dr. Skeer was a *Manager of Engineering Economics* at Bell Telephone Laboratories (Murray Hill, New Jersey) and a Technical Project Coordinator for Network Planning and Operations (Holmdel, New Jersey). He subsequently was a Manager of AT&T Corporate Strategic Planning (New York City), reporting to the Office of the Chairman. He established an independent consulting practice for 13 years, during which time was closely affiliated with DCI in the conduct of Management Audits and Operations Reviews. Later, as a *Managing Executive Consultant* at Navigant Consulting (a.k.a., Resource Management International) -- a major New York Stock Exchange-listed consulting firm -- he had project management responsibility for telecommunications engagements for such clients as Silicon Valley Power (City of Santa Clara, CA), the City of Anaheim (CA), and the Florida Municipal Power Agency.

**EDUCATION &
CERTIFICATIONS**

Dr. Skeer is a *Certified Management Consultant*, as a member of the Institute of Management Consultants (IMC). He was a *Licensed Professional Engineer* in New York and New Jersey.

Dr. Skeer holds Ph.D. and MS degrees in Engineering from Carnegie-Mellon University, Pittsburgh, where he taught advanced undergraduate courses in engineering and numerical analysis. He received a BS in Engineering from The Cooper Union, New York City, and an MBA in Finance from American University, Washington.

He was a recipient of full-tuition four-year teaching assistantship at Carnegie-Mellon University; a four-year New York State Scholarship; and was a Member of the Sigma XI Honorary Engineering Society.

Mr. Martin H. Skeer, Ph.D., CMC, continued
Senior Consultant

**PROJECT
MANAGEMENT &
CONSULTING
EXPERTISE**

Dr. Skeer, as a *Lead Consultant*, conducted management audits and operations and effectiveness reviews of major energy and telecommunications companies. He was responsible for evaluation of performance and business practices which, for various electric utilities and Local Exchange Carriers, have encompassed the following functional areas (in alphabetic order):

- | | |
|---|---|
| ◆ Business and Strategic Planning | ◆ Network Planning |
| ◆ Central Office and Outside Plant Operations | ◆ Operator Services |
| ◆ Customer Services | ◆ Organization and Executive Management |
| ◆ Directory Publishing | ◆ Performance Measurement |
| ◆ Economics of Equipment Replacement | ◆ Process Reengineering |
| ◆ Engineering and Construction | ◆ Procurement/Make-Vs.-Buy Decisions |
| ◆ External Affairs | ◆ Software Capabilities |
| ◆ Governmental and Regulatory Affairs | ◆ Technology Deployment |
| ◆ Marketing and Product Management | ◆ Workforce Management |

**GAS & ELECTRIC
PROJECT
MANAGEMENT &
CONSULTING
EXPERTISE**

As a lead consultant Dr. Skeer conducted financial and technical analysis on behalf of the Transmission Agency of Northern California and Level 3 Communications to supplant an existing SCADA microwave system with a fiber optic network. He worked with Level 3 team to develop requirements and formulate contractual arrangements for Indefeasible Right to Use, Colocation, and Professional Services contractual agreements. (2005 – 2006)

Dr. Skeer prepared a market evaluation of Central Hudson Gas & Electric surplus lands along the Companies rights of way and freestanding sites. Issues included: willingness to take “subject to” contracts; time allowance for site plan approval; revenue requirements over time; phased rollout of properties to maximize returns and realize expedient sales. (2005)

Dr. Skeer prepared a business case to assess financial opportunities that were afforded by assets of Potomac Electric Power Company (PEPCo’s) communications antenna leasing business, involving transmission and communications tower sites that serve as platforms for wireless facilities. He incorporated business models that assigned existing lease rights to a third party in exchange for a lump sum payment in the current year. Business case analysis encompassed: value propositions and rationale; current operating environment; business strategy; competitive assessment; critical success factors; business risk factors; pro forma financial results; organizational roles within Pepco; possible exit strategies and sunk costs. (2003)



Mr. Martin H. Skeer, Ph.D., CMC, continued
Senior Consultant

**UTILITY &
COMMISSION
PROJECT
MANAGEMENT &
CONSULTING
EXPERTISE**

Dr. Skeer conducted an Operations Review for the Chelan (WA) Public Utility District (CPUD) that identified the most attractive options for increasing the efficiency and effectiveness of the existing outside party/joint use program. Provided an independent, expert review that evaluated organization, operations and administration functions. He assessed the outside party/joint use program relative to CPUD's current and future requirements and industry best practices. Identified key issues for further analysis and action. Assessed activities associated with operating and administering joint use of CPUD assets by its affiliates and outside parties. As activities were highly fragmented across organizations and personnel, Dr. Skeer developed a "virtual cost center" analysis to bring disparate activities together in a cohesive framework so that the underlying costs and personnel resources could be clearly defined. With building blocks in place, underlying costs associated with these activities were identified, which provided a basis for establishing a compensatory rate structure to ensure that CPUD customers were not subsidizing third parties. (2004 – 2005)

Dr. Skeer developed business case to assess potential increase in revenues from Ameren Services' joint use assets from technical, market and financial perspectives. Identified target firms in key sectors for potential acquisition. Collected and analyzed data on competitive pricing of services. Created preliminary scope and framework for the new Ameren Services business model and revenue targets. Identified preliminary resource requirements and key risks and drivers for successful implementation. (2001)

Dr. Skeer has assessed opportunities for improved service quality and cost savings; conducted in-depth interviews with company management and operations personnel; reviewed proprietary documentation; performed quantitative and qualitative analyses; and documented findings and recommendations in reports to the top corporate management and regulatory commissions. He has prepared specific plans and benefit/cost analysis for implementing proposed recommendations. (1987 through 1996)

Mr. Martin H. Skeer, Ph.D., CMC, continued
Senior Consultant

**OTHER
 RELEVANT
 EXPERIENCE**

As expert witness, provided testimony on the impact of telecommunications in rural service areas. Prepared report in conjunction with proposed toll rate restructuring plan, initiated by South Carolina Telephone Association on behalf of consortium of member companies. Considered needs of rural constituencies, and economic and financial impact of telecommunications on quality of life issues. (1998)

As consultant to the Small Business Administration, provided managerial and technical assistance to over 100 small businesses, from startups to established firms. Counseling and training were directed towards resolution of organizational, financial, marketing, and technical and “systemization” problems. Support included Business Case development, financial analysis, competitive analysis, technology deployment and risk assessment for companies seeking loans to expand or strengthen business capabilities. (2005 – 2006)

Conducted telecommunications planning for the Santa Clara Convention Center to address requirements for accommodating a diverse array of conventions and conferences. High-profile events generally involved leading edge, multi-media technology for staging effective programs and exhibits. The study addressed: the importance telecommunications services of Convention Center profitability; technology needed to differentiate the Santa Clara facility and achieve a competitive advantage compared to other convention centers; and streamlining operations that can be achieved through enhanced telecommunications capability. The study process entailed: conducting focus groups and interviews; preparing scripts and questionnaires to ensure key points are addressed and that informative, meaningful discussion were stimulated; comparative analysis with a panel of other convention centers; and identifying operations cost saving opportunities. (2001)

As strategic planning manager, explored alternatives to meet increased demand for *custom* chips and memories. Conducted analysis of make-versus-buy alternatives. Developed financial model of device business which considered construction of state-of-the-art plant; expanding and upgrading existing manufacturing facilities in outmoded plant; and increased reliance on the external *merchant* market as source of supply for proprietary devices. Prepared *Electronic Components Market Strategy and Rationale* study for office-of-the-chairman demonstrating viability of the expansion alternative, recommending construction go-ahead. (1985)

As technical specialist, analyzed manufacturing standard costs for wire and cable and switching systems plants. Performed correlation studies to identify key parameters affecting economy-of-scale and productivity. Developed financial model of manufacturing operations to address make-versus-buy decisions for network systems and transfer pricing considerations. (1984)

Mr. Martin H. Skeer, Ph.D., CMC, continued
Senior Consultant

Verizon New York

Lead Consultant

- ◆ Organization and management analysis
- ◆ Capital and maintenance planning
- ◆ Customer services and field operations
- ◆ Best practice comparisons

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.

Bell Laboratories

Technical Project Coordinator

- ◆ Facilitation
- ◆ Report definition
- ◆ Cost reduction

Chaired series of joint AT&T/Customer meetings with Boeing (aerospace), Bank of America (financial), General Motors (manufacturing), and Carter Hawley Hale (retail); chaired joint AT&T/Bank of America strategic planning conference on future telecommunications requirements of banking industry. Contributed to report defining Systems Architecture requirements to leverage products across market segments, increase systems and service compatibility among Lines of Business, and reduce development and production costs. (1978-1979)

AT&T

Strategic Planning Manager

- ◆ Re-engineering analysis
- ◆ Corporate strategic planning

Developed model utilizing portfolio theory to assess strength/weakness of newly formed AT&T Lines of Business relative to key competitors. Applied model to identify weaknesses in critical technologies, affecting allocation of resources for research and development and calling for increased development of alliances with third parties to round-out capabilities. Contributed to Corporate Strategic Planning report recommending specific actions to strengthen firm's competitive position in providing integrated solutions. (1982-1983)

Mr. Martin H. Skeer, Ph.D., CMC, continued
Senior Consultant

Bell Laboratories

Technical Manager

- ◆ Best practice development
- ◆ Departmental management
- ◆ Systems integration

Developed engineering-based cost methods, study tools, and unit costs to meet federal, state and internal cost requirements for local and long distance voice, data, and video services. Managed development of large-scale computer systems and databases for derivation of fully distributed and long run incremental costs. Integrated large-scale information systems, which combined operations and accounting data from nationwide operations centers. Developed exchange network cost allocation models for assigning common costs to services. Evaluated levels of long distance network plant utilization and productivity. Provided inputs to functional accounting systems. Transferred prototype systems to nationwide computer operations center and supported first applications shakedown. (1974 – 1976)

Bell Laboratories

Technical Project Coordinator

- ◆ Service implementation
- ◆ Task force management
- ◆ Productivity improvements

Development of Private Network services to meet full range of telecommunications needs of large corporations. Service implementation involved far-flung development, manufacturing, operations, and marketing organizations. Responsible for resolving critical development issues. Managed task forces to implement performance improvements. Established requirements for operations and administrative centers to meet service quality/performance standards. Assessed productivity improvements through introduction of advanced technology and operations support systems. Developed service attitude measurement questionnaires for *first applications* customers. Assessed customer perception of service features and effectiveness of operations systems through surveys of key customer segments. (1977 – 1979)

Bell Laboratories

Technical Supervisor

- ◆ Standards analysis
- ◆ Correlation studies

As, analyzed manufacturing standard costs for wire and cable and switching systems plants. Performed correlation studies to identify key parameters affecting economy-of-scale and productivity. Developed financial model of manufacturing operations to address make-versus-buy decisions for network systems and transfer pricing considerations. (1975 – 1976)



Mr. Martin H. Skeer, Ph.D., CMC, continued
Senior Consultant

Telephone and Energy Utilities Served

- | | |
|---|--|
| ◆ Ameren Corporation | ◆ GTE North-Pennsylvania Operations |
| ◆ Bell Telephone Company of Pennsylvania | ◆ Guam Telephone Authority |
| ◆ Central Hudson Gas & Electric Company | ◆ Illinois Bell Telephone Company |
| ◆ Contel of Illinois, Inc. | ◆ New York Telephone Company |
| ◆ Contel of Texas, Inc. | ◆ Qwest Communications, Inc. |
| ◆ Contel/GTE New York | ◆ South Central Bell Telephone Company in Kentucky |
| ◆ Continental Telephone Company of Pennsylvania | ◆ Telephone Electronics Corporation |
| ◆ General Telephone Company of Pennsylvania | ◆ Toronto Hydro |
| ◆ GTE Corporation | ◆ United Telephone Company of Pennsylvania, Inc. |
| ◆ GTE North-Illinois Operations | ◆ United Telephone Company of Texas, Inc. |
| | ◆ Verizon New York, Inc. |

Regulatory Authorities and Associations Served

- | | |
|--|---|
| ◆ Anaheim (CA), City of | ◆ Pennsylvania Public Utility Commission |
| ◆ Arizona Corporation Commission | ◆ Pension Guarantee Trust Corporation |
| ◆ Burlington (VT), City of | ◆ Potomac Electric Power Company |
| ◆ Chelan (WA) Public Utility District | ◆ Public Service Electric & Gas Company |
| ◆ Colorado Public Utilities Commission | ◆ Public Utilities Commission of Ohio |
| ◆ District of Columbia Public Service Commission | ◆ Public Utility Commission of Texas |
| ◆ Florida Municipal Power Agency | ◆ Sacramento Builders Exchange |
| ◆ Guam Public Utility Commission | ◆ Silicon Valley Power (Santa Clara, CA) |
| ◆ Illinois Commerce Commission | ◆ Small Business Development Center (CA) |
| ◆ Kansas Corporation Commission | ◆ Tennessee Public Service Commission |
| ◆ Kentucky Public Service Commission | ◆ Transmission Agency of Northern California |
| ◆ Long Island Power Authority | ◆ Truckee-Donner (CA) Public Utility District |
| ◆ New York Public Service Commission | ◆ West Sacramento (CA), City of |

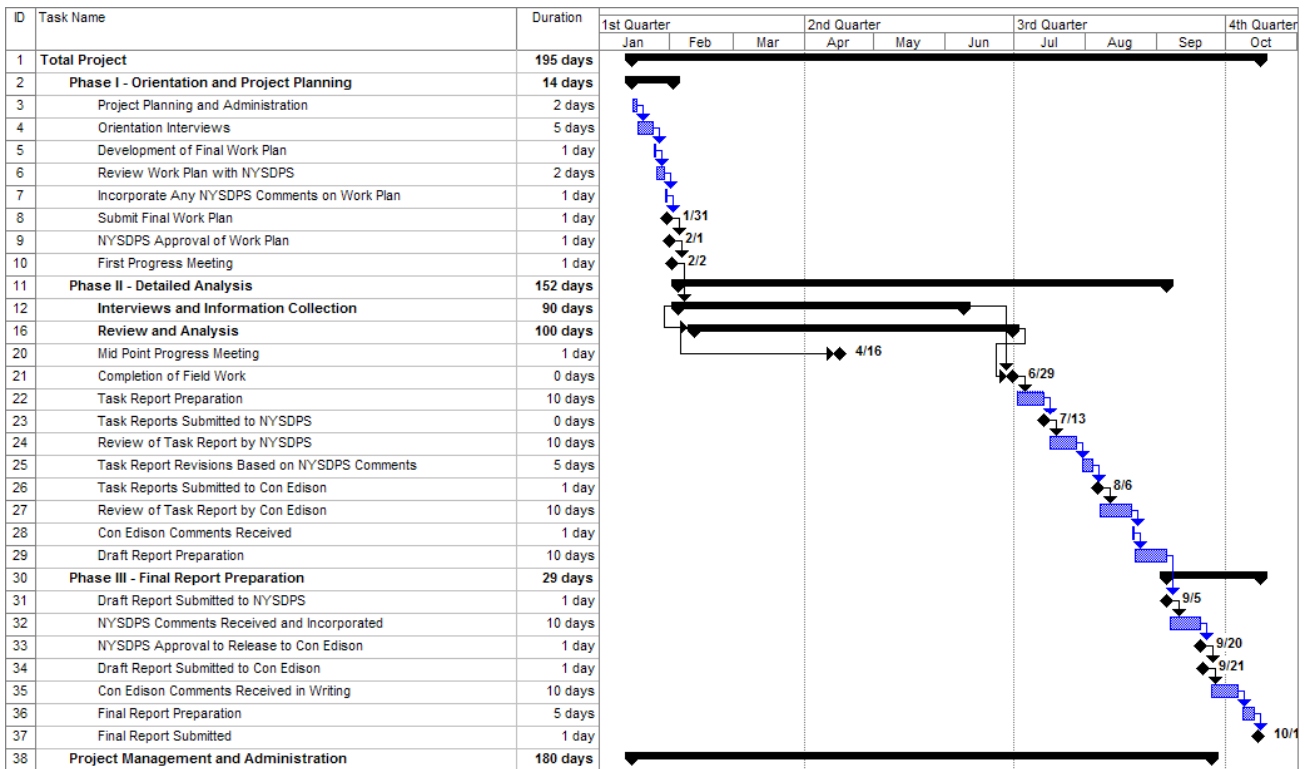
VI. Schedules and Budgets

This chapter presents the proposed schedule and budgets for the Schumaker & Company project team to perform the forthcoming review of Consolidated Edison Company of New York’s Electric Emergency Outage Program.

A. Overall Schedule

Our overall schedule as shown in *Exhibit VI-1*.

**Exhibit VI-1
Project Schedule**



A more detailed schedule is provided in *Appendix B*.

B. Overall Budget

Schumaker & Company's overall estimated price and costs are summarized in *Exhibit VI-2*.

**Exhibit VI-2
Budget Summary**

Professional Fees	\$714,760
Travel Expenses	\$88,061
Services and Materials	\$28,591
	<hr/> \$831,412

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.

Hours and Professional Fees

Schumaker & Company's estimated hours and fees by phase, by consultant, and by work plan area are shown in *Exhibit VI-3*. The hourly billing rates, by consultant, are provided in the exhibits. Our consultants charge their time on a daily basis to a maximum of 10 hours. Time worked in excess of 10 hours per day is not billed to the client.

**Exhibit VI-3
Budget Hours, Fees, Expenses By Phase, Consultant, and Work Plan Area**

Phase I - Orientation and Project Planning	Category	Rate	Project Planning	Orientation Interviews	Final Work Plan	Progress Meeting	Total Hours	Total Fees
Dennis Schumaker	Project Manager	\$245	8	24	12	8	52	\$12,740
Eileen Unger	Assistant Project Manager	\$225	8	24	12	8	52	\$11,700
Martin Murphy	Executive Consultant II	\$225		24			24	\$5,400
Martin Skeer	Senior Consultant	\$200		24			24	\$4,800
Michael Caffrey	Senior Consultant	\$175		24			24	\$4,200
Thomas Langley	Senior Consultant	\$175		24			24	\$4,200
Phase I - Orientation and Project Planning - Totals			16	144	24	16	200	\$43,040

Phase II - Detailed Review and Analysis	Category	Rate	Interviews & Field Visits	Data Review and Analysis	Draft Task Report	Project Meetings	Total Hours	Total Fees
Work Plan Area 1 - Planning and Preparedness								
Dennis Schumaker	Project Manager	\$245	64	64		24	152	\$37,240
Martin Skeer	Senior Consultant	\$200	120	120	40		280	\$56,000
Michael Caffrey	Senior Consultant	\$175	120	120	40		280	\$49,000
Total			304	304	80	24	712	\$142,240
Work Plan Area 2 - Performance/Effectiveness								
Dennis Schumaker	Project Manager	\$245	64	64		24	152	\$37,240
Martin Murphy	Executive Consultant II	\$225	120	120	40		280	\$63,000
Thomas Langley	Senior Consultant	\$175	120	120	40		280	\$49,000
Total			304	304	80	24	712	\$149,240
Work Plan Area 3 - Best Practices								
Dennis Schumaker	Project Manager	\$245	64	64		24	152	\$37,240
Eileen Unger	Assistant Project Manager	\$225	80	80	80	24	264	\$59,400
Michael D'Auria	Senior Consultant	\$175	120	120	40		280	\$49,000
Siegfried Guggenmoos	Senior Consultant	\$195	40	40	40		120	\$23,400
Matthew Custer	Consultant	\$150	40	40	40		120	\$18,000
Michael Beatty	Consultant	\$125	40	40	40		120	\$15,000
John Bakula	Consultant	\$175	40	40	40		120	\$21,000
Total			424	424	280	48	1176	\$223,040
Phase II - Detailed Review and Analysis- Totals			1032	1032	440	96	2600	\$514,520

Phase III - Draft and Final Report Preparation	Category	Rate	Draft Report	Draft Report Verification	Final Report	Total Hours	Total Fees
Dennis Schumaker	Project Manager	\$245	64	16	8	88	\$21,560
Eileen Unger	Assistant Project Manager	\$225	64	16	8	88	\$19,800
Gail Stopar	Analyst	\$95	64		8	72	\$6,840
Phase III - Draft and Final Report Preparation - Totals			192	32	24	248	\$48,200

Project Management and Administration	Category	Rate	Project Management	Editing	Admin	Total Hours	Total Fees
Dennis Schumaker	Project Manager	\$245	120			120	\$29,400
Eileen Unger	Assistant Project Manager	\$225	120			120	\$27,000
Gail Stopar	Analyst	\$95		80		80	\$7,600
Project Administrator	Project Administrator	\$45			1000	1000	\$45,000
Project Management and Administration - Totals			240	80	1000	1320	\$109,000

The proposed hours and fees by staff member is shown in *Exhibit VI-4*.



**Exhibit VI-4
Hours and Fees By Staff member**

Totals By Staff Member		Rate	Total Hours	Total Fees
Dennis Schumaker	Project Manager	\$245	716	\$175,420
Eileen Unger	Assistant Project Manager	\$225	524	\$117,900
Martin Murphy	Executive Consultant II	\$225	304	\$68,400
Martin Skeer	Senior Consultant	\$200	304	\$60,800
Michael D'Auria	Senior Consultant	\$175	280	\$49,000
Michael Caffrey	Senior Consultant	\$175	304	\$53,200
Thomas Langley	Senior Consultant	\$175	304	\$53,200
Siegfried Guggenmoos	Senior Consultant	\$195	120	\$23,400
John Bakula	Consultant	\$175	120	\$21,000
Matthew Custer	Consultant	\$150	120	\$18,000
Michael Beatty	Consultant	\$125	120	\$15,000
Gail Stopar	Support Consultant	\$95	152	\$14,440
Project Administrator	Project Administrator	\$45	1000	\$45,000
Total Project - Totals			4368	\$714,760

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

Travel Expenses/Supplies and Materials 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.

In calculating estimated supplies and materials costs, the assumption has been made that ConEd 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, draft report, and final report

- Word processing and computer usage

- Copying and miscellaneous supplies

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

Our normal procedure for all draft working 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. Final reports are not included in the above pricing but we would produce however many copies of the final report are required at our cost.

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 semi-monthly invoice for fees and expenses associated with a project with a copy of the monthly progress report attached (sent the end of the month only). The invoice will include the following categories: professional fees, travel expenses (transportation, meals, lodging, etc.), and services and materials.

Professional fees are determined by multiplying the time spent by the consultant on these investigations during the reporting period by the individual's professional billing rate.

Travel expenses are actual expenses, based on cost, reported semimonthly by consultants assigned to the study, and include transportation, meals, lodging, etc.

Services and materials are billed as a percentage of professional fees. These charges include costs related to editing, word processing, laptop computer usage, copying, and communications (postage, overnight freight, facsimile, telephone, etc.). The estimate provided in this proposal is a not-to-exceed cost for these expenses.

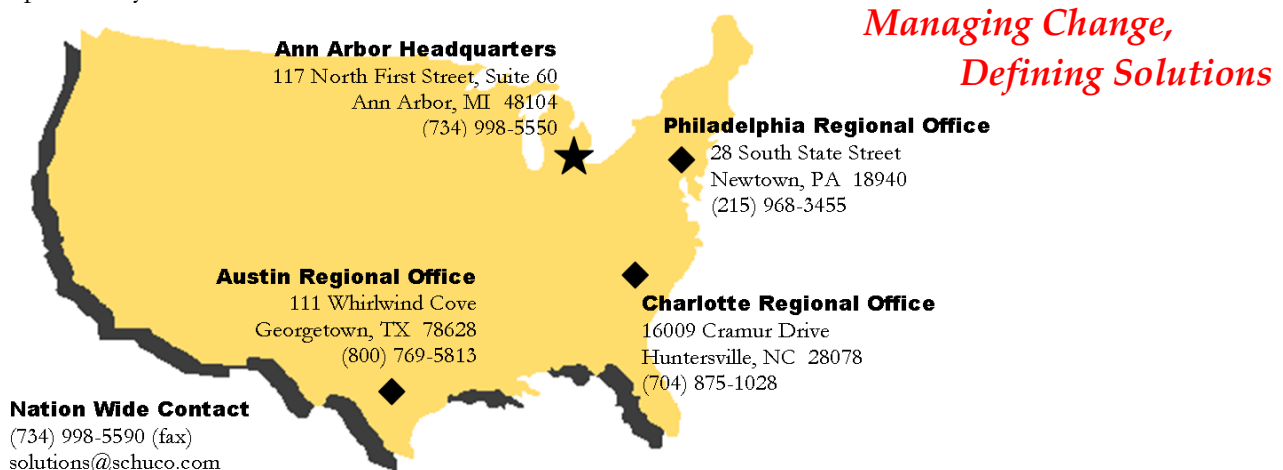
Our accounting records are available in our Ann Arbor office for inspection and audit.



VII. Qualifications of the Firm

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. Since our inception as a Michigan corporation in 1986, we have 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, California, and Wayne County (Michigan). To better support our national client base, Schumaker & Company maintains offices in four strategic locations across the country, specifically:



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 a framework to get from here to there; in other words, a way to manage the change.

A. Firm Stability

Schumaker & Company has experienced continuous growth resulting in a level of financial viability and resource acquisition that allow us to take on large projects. We have a large number of consultants and associates available for staffing projects. We have always been able to perform our clients' projects in a comprehensive and timely manner. Our projects have typically ranged from a one-person, \$5,000, 50-hour effort to a 20-person, \$1 million, 9,000-hour effort. Most of our projects range from \$200,000



to \$1 million in billings. Our projects often involve several consultants over many months. We have the requisite project management methodologies in place to effectively control such large efforts.

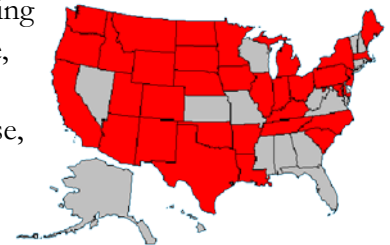
B. Our People

Schumaker & Company has 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 is expert in the technical aspects of electric, gas, water, and telecommunications operations, as well as relevant regulatory proceedings. This combined knowledge base makes our firm uniquely qualified for the most complex and demanding assignments.

Many of our consultants are *Certified Management Consultants (CMCs)*,¹⁰ *Project Management Professionals (PMPs)*,¹¹ *Certified Public Accountants (CPAs)*,¹² *Professional Engineers (PEs)*, *Microsoft Certified Professionals (MCPs)*,¹³ *Microsoft Certified System Engineers (MCSEs)*, or *Microsoft Certified Systems Developers (MCSDs)*. Schumaker & Company is also a *Microsoft Certified 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.



Our consultants have conducted comprehensive and focused management and operations assessments of organizations nationwide. Schumaker & Company has performed consulting assignments for clients in 33 states. Our clients benefit from the competence, knowledge, and attention of a core team of highly skilled professionals who work well together. This structure enables us to offer the recognized expertise, senior-level staffing, and administrative support characteristic of larger firms, without comparable overhead. Additionally, we provide the important benefits of flexibility and attentiveness that only smaller firms can offer.



C. Managing Change, Defining Solutions

We work closely, yet unobtrusively, with management to identify specific opportunities for improvement and develop solutions. We develop practical implementation plans to help manage change and achieve the desired improvements.

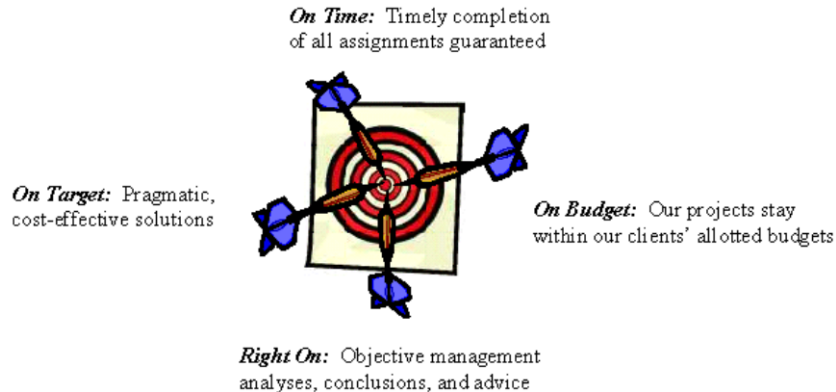
¹⁰ / “CMC” and CMC logo are certification marks of the Institute of Management Consultants (IMCUSA) that are registered in the US and other nations.

¹¹ / 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 US and other nations.

¹² / 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 where s/he is registered.

¹³ / The MCP, MCSE, and MCSD certifications are designations of Microsoft Corporation.

We are committed to delivering results that are:



Our clients retain Schumaker & Company, often for multiple assignments, due to the excellent firm credentials we bring to assignments. These credentials 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, and accomplished the project well within the mandated timeframe. Additionally, we achieved these results using less 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 and 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.

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.

Our services are cost-effective. Our project teams are comprised 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 keep the firm's administrative burden low, so that our clients are not paying for excessive overhead. Our staff is

comprised of seasoned talent, which ensures that our clients are not paying for consultants to learn at the client's time and expense.

We are unwaveringly objective. In all our dealings with clients, we maintain independence and objectivity. This 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 deeply entrenched in the daily operations of the organization.

Exhibit VII-1 presents a summary of the functional advantages that a Schumaker & Company project team brings to an assignment.

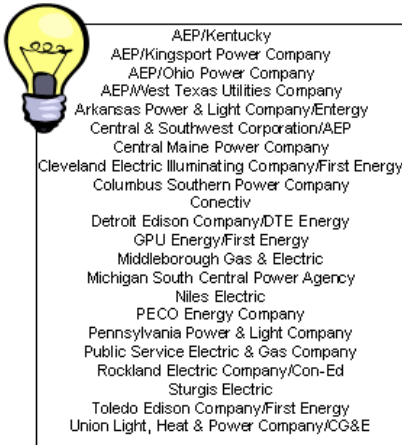
Exhibit VII-1
Schumaker & Company Areas of Expertise

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, 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, which 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 develop recommendations 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 short- and long-term.
Operations Expertise	Our consultants have prior backgrounds as managers and staff in many different kinds of utility operations, which allows 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 and ensure that our clients achieve the maximum leverage on their information technology investments.
Cross-Functional Experience	As 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, 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, followed by 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.

D. Prior Utility Experience

Clients are satisfied with the results we deliver. In recent years, Schumaker & Company has completed more than 100 major management, operations, performance, and technology projects in the utility industry at the request of public and municipal utilities, telecommunications firms, state and local governmental agencies, manufacturing firms, and service organizations in 33 states. 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.

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 of these relationships 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, and 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,

Schumaker & Company has served numerous clients in different areas of the utility industry.

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.

Collectively combining our perspectives ensures successful results for clients. Many of our projects have dealt specifically with technology itself; other projects 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; identify specific opportunities for improvement; and 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.

Exhibit VII-2 contains a summary of the specific expertise that Schumaker & Company brings to all of its utility assignments.

Exhibit VII-2
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.
Performance Measurement	Definition and quantification of accurate performance indicators. This process 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 intercompany 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.
Fuels Management	Analysis and development of procurement practices and fuel requirements planning. Ensure 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 to streamline operations and reduce costs. Assistance in strategic migration path engineering by developing and implementing long-range strategic technology and systems plans. Planning, design, development, and implementation of information systems. Assistance in selection of computer and telecommunications hardware and software.
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 workforce productivity, reduce labor costs, and improve departmental cooperation. Enhance decision-making and shorten 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 workforce management.
Human Resources	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.
Nuclear	Evaluate nuclear power plant operations, such as operating characteristics, historical and current industry factors, NRC requirements and concerns, and need for economic dispatch of units. Determine the relative level of management prudence and overall effectiveness as it relates directly to nuclear operating facilities and programs.



E. 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 that we typically provide include:



- ◆ Management, operations, and performance reviews and assessments
- ◆ Competitive assessments and customer surveys
- ◆ Strategic and operations planning
- ◆ Business process reengineering and quality improvement programs development
- ◆ Performance measurement development
- ◆ Project management
- ◆ Project management and work management systems implementation assistance
- ◆ Planning and optimization of information technology

When performing these services, our consultants perform the following activities:

Management, Operations, and Performance 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.

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 their operations against those of similar organizations. Studies such as these allow the organization to view their operations through the eyes of the recipients of their services, as well as their peers.

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 off-site 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 development of specific goals and objectives, commitments to action, timetables, and the foundation for comprehensive roll-out plans.



Business Process Reengineering 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, including 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, and in developing recommendations for improvements through the use of process analysis teams to identify redundant or unneeded activities, bottlenecks in processes, etc.

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.

Project Management – We provide dedicated, professional project managers who can direct the undertaking and implementation of large, comprehensive projects involving people, processes, 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, as a means to keeping projects on time and within budget while at the same time upholding the quality level desired by management.

Project Management and 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.

Planning and Optimization of Information Technology – When our clients are concerned about the overall effectiveness of management, organizational structure, technical environment, or major operating policies and procedures with regard to information technology or data processing functions, we perform assessments of their development, maintenance, support and operations activities; recommend alternatives; and assist in the implementation of changes as a means of streamlining operations and reducing costs. We assist our clients in determining the basic direction of their information systems and technology plans and ensuring that they align with the organization’s overall strategies and plans. We help to determine the information needs of different levels of users as input to planning, designing, developing, and deploying systems and applications.

F. Ability to Respond Rapidly

At Schumaker & Company, we take pride 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 have a depth and breadth of experience that will allow us to provide our clients with a final work product in a reasonable time frame and 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.

G. Testimony by Schumaker & Company Staff



Schumaker & Company staff members have provided expert testimony to a number of state commissions, including:

Year	Commission	Subject
1993	Maine	Focused Management Audit of Central Maine Power Company
	Illinois	Focused Management Audit of the Affiliated Transactions of Illinois Bell Telephone Company
1992	Philadelphia	Management Audit Follow-up of the Philadelphia Gas Works
	Arkansas	Management Audit of General Waterworks of Pine Bluff
	Ohio	Fuel-Related Practices of Cleveland Electric Illuminating
1991	Ohio	Fuel-Related Practices of Cleveland Electric Illuminating
	Ohio	Fuel-Related Practices of Toledo Edison Company
1990	Ohio	Fuel Procurement Practices of Columbus Southern Power Company
	Ohio	Fuel Procurement Practices of Ohio Power Company
	Maine	Customer Service System Project Implementation of Central Maine Power Company
1989	Ohio	Fuel Procurement Practices of Ohio Power Company
1986	Ohio	Fuel Procurement Practices of Cleveland Electric Illuminating
1984	Ohio	Fuel Procurement Practices of Toledo Edison
	Ohio	Fuel Procurement Practices of Cleveland Electric Illuminating
1983	New York	Allowable Costs of Shoreham Nuclear Plant
1982	Wisconsin	Cost Overrun of Pleasant Prairie Project
1981	Pennsylvania	Formation of GPU Nuclear Corporation

H. Prior Experience

The following table provides a partial list of our most relevant projects for state and local governments, telecommunications firms, utilities, service companies, and manufacturing firms with which our consultants have worked during the last several years. 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.

Consultant Representative Assignments

INVESTOR OWNED ELECTRIC, GAS, & WATER UTILITIES

AEP/Kentucky
 AEP/Kingsport Power Company
 AEP/Ohio Power Company
 AEP/West Texas Utilities Company
 American Natural Resources
 Arkansas Power and Light Company/Entergy Corporation
 Baltimore Gas & Electric Company
 Central Maine Power Company
 Cincinnati Gas and Electric Company (CG&E)
 Cleveland Electric Illuminating Company
 Columbia of Maryland, Inc.
 Columbus Southern Power Company
 Conectiv
 Consumers Power Company
 Cooperative Power Association
 Dayton Power and Light Company
 Detroit Edison Company
 Electricity Supply Board of Ireland
 Elizabethtown Gas Company/NUI Corporation
 Empire Electric District Company
 Enbridge
 Florida Power and Light Company
 Georgia Power Company
 General Waterworks Corporation (Pine Bluff)
 GPU Energy
 Illinois Electric Co., Illinois Power Co.
 Iowa-Illinois Gas & Electric Company
 Jacksonville Electric Authority
 Jersey Central Power and Light Company
 Kentucky-American Water Company
 Metropolitan Edison Company
 Michigan South Central Power Agency
 Michigan Wisconsin Pipeline
 Missouri Public Service Company
 Nebraska Public Power District
 New Jersey Natural Gas Company
 New Orleans Public Service Inc.
 Niagara Mohawk Corporation
 Pacific Gas and Electric Company
 PECO Energy Company
 People's Natural Gas Company
 Pennsylvania Gas & Water Company
 Pennsylvania Power & Light Company
 Philadelphia Gas Works
 Philadelphia Suburban Water Company
 Public Service Electric and Gas Company
 Rockland Electric Company
 Sierra Pacific Power Company
 Springfield City Utilities
 Southern California Edison Company
 Southern California Gas Company
 South Jersey Gas Company

INVESTOR OWNED ELECTRIC, GAS, & WATER UTILITIES, CONTINUED

Sunflower Electric Cooperative
 Tennessee Valley Authority
 Toledo Edison Company
 Union Electric Power Company
 Union Light, Heat and Power Company/CG&E
 United Water New Jersey
 Utilicorp United, Inc.
 Washington Gas Light Company
 Water Services Corporation
 Western Kentucky Gas Company
 Wisconsin Electric Power Company

TELECOMMUNICATIONS COMPANIES

ALLTEL, Inc.
 American Telephone & Telegraph Company (AT&T)
 Bell of Pennsylvania Telephone Company
 Commonwealth Telephone Company
 Contel (Illinois and Texas)
 Illinois Bell Telephone Company
 Mountain Bell of Colorado
 New England Telephone Company
 New York Telephone Company
 Ohio Bell Communications
 SBC Ameritech Indiana
 South Central Bell Telephone Company of Kentucky
 United Telephone of Texas
 U S WEST
 Verizon New York
 Verizon Pennsylvania

STATE GOVERNMENT AGENCIES

Alaska Regulatory Commission
 Arizona Corporation Commission, Utilities Division
 Arkansas Public Service Commission
 California Public Utilities Commission
 Colorado Public Utilities Commission
 Idaho Public Utilities Commission
 Illinois, Illinois Commerce Commission
 Indiana Utility Regulatory Commission
 Iowa Utilities Board
 Kansas Corporation Commission
 Kentucky Public Service Commission
 Maine Public Utilities Commission
 Maryland Public Service Commission
 Massachusetts Department of Public Utilities
 Michigan Commission for the Blind
 Michigan Department of Agriculture
 Michigan Department of Community Health
 Michigan Department of Corrections
 Michigan Department of Environmental Quality
 Michigan Department of Labor
 Michigan Department of Management & Budget



Consultant Representative Assignments, Continued

STATE GOVERNMENT AGENCIES, CONTINUED

Michigan Department of Treasury
 Michigan Department of Consumer & Industry Services
 Michigan Family Independence Agency
 Michigan Insurance Bureau
 Michigan MAIN
 Michigan Office of Financial and Insurance Services
 Michigan State Hospital Finance Authority
 Minnesota Public Utilities Commission
 Mississippi Public Service Commission
 Montana Public Service Commission
 National Transportation Safety Board
 Nebraska Public Service Commission
 Nevada Public Service Commission
 New Jersey Board of Public Utilities
 New York Public Service Commission
 North Dakota Public Service Commission
 Ohio Public Utilities Commission
 Oregon Public Utilities Commission
 Pennsylvania Public Utility Commission
 Public Service Commission of Utah
 Public Service Commission of Wisconsin
 Public Utility Commission of Texas
 South Carolina Office of Regulatory Staff
 South Dakota Public Utilities Commission
 Synthetic Fuels Corporation
 Tennessee Regulatory Authority
 Tennessee Valley Authority, Board of Directors
 U.S. Air Force - Wright Patterson Air Force Base
 U.S. Army, Information Management Offices
 Washington Utilities & Transportation Commission
 Wyoming Public Service Commission

LOCAL GOVERNMENT AGENCIES

City of Clinton (Michigan)
 City of Coldwater (Michigan)
 City of Dearborn (Michigan)
 City of Detroit (Michigan)
 City of Hillsdale (Michigan)
 City of Marshall (Michigan)
 City of Niles (Michigan)
 City of Philadelphia (Pennsylvania)
 City of Springfield (Missouri)
 City of Sturgis (Michigan)
 City of Union City (Michigan)
 Michigan South Central Power Agency
 Town of Hilton Head Island (South Carolina)
 Town of Middleborough (Massachusetts)

MANUFACTURING/DISTRIBUTION FIRMS

Accuma Corporation
 A.C. Spark Plug
 Amoco Oil
 Ann Arbor Plastics
 Applied Dynamics International
 Bank Building Corporation
 Bosquett & Company
 Design & Test Technologies
 General Motors/Chevrolet & Pontiac Divisions
 Griffith Labs
 Holcim Corporation
 Owens Corning
 Rockwell/Eaton AIL

SERVICE COMPANIES

The ABOW Companies
 Baltimore Cass Auto Wash
 Bank of Montreal
 Coopers & Lybrand
 Crocker International
 C.S. Mott Foundation
 E.D.S.
 E. F. Hutton
 Henry Ford Community College
 High Scope Educational Research Foundation
 Home Box Office
 Intech Leasing
 JARC
 LaLonde & Co.
 Main Hurdman
 Manufacturers Hanover Trust
 M-CARE
 NBD Bank, NA
 O'Neal Construction
 Servant Publications
 Thorondor International

RETAIL FIRMS

Albert's
 Busch's Valu Land
 Circus World Toy Stores
 K-Mart Corporation

ELECTRIC UTILITY ASSIGNMENTS

PECO Energy Company
Philadelphia, Pennsylvania

June 2006 – March 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 Company
Regulatory & Governmental Affairs
2301 Market Street S15-2
Philadelphia, PA 19103
(215) 841-5771
rich.schlesinger@peco-energy.com

Assisting the Pennsylvania Public Utility Commission (PUC) staff in a stratified management and operations audit of PECO Energy Company. This audit consists of three phases. The first phase is a diagnostic review assessing the condition of each functional area or business unit against evaluative criteria or expected business practice. While this review is primarily limited to determining if appropriate management controls, systems and processes are in place, it is of sufficient scope to identify significant problems, if any, requiring additional focused analysis. All recommendations are quantified except where this is impossible. The second phase is an in-depth analysis of pre-identified areas or issues. 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. The third phase, if necessary, will be an in-depth, focused analysis of specific areas or issues approved by the Bureau of Audits resulting from the diagnostic review in the first phase.

Schumaker & Company will prepare the final report based on the draft report, comments received from the Commission *Project Officer* and PECO, 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.

Presentations to various audiences or testimony will be provided as necessary.

This assignment involves ten consultants in roughly 4000 hours during a 9-month effort for a total project cost of approximately \$843,000.



ELECTRIC UTILITY ASSIGNMENTS

AEP/Kentucky

Hazard, Kentucky

*August 2002 – February 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, P.O. Box 5190
Frankfort, KY 40602-5190
(502) 696-7010
ekwagner@aep.com

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. This assignment involved six consultants in roughly 700 hours of effort during a 6-month effort for a total project cost of approximately \$145,000.

ELECTRIC UTILITY ASSIGNMENTS

***New Jersey Board of
Public Utilities***

Newark, New Jersey

***Conectiv
GPU Energy
Public Service Electric &
Gas
Rockland Electric***
November 2000 – April 2001

Mr. Chris Molner
Principal Utility Mgmt Analyst
New Jersey Board of Public Utilities
Two Gateway Center, 8th Floor
Newark, NJ 07102-5003
(973) 648-7690
molner@bpu.state.nj.us



Assisted New Jersey Board of Public Utilities (BPU) staff in reviewing and monitoring the implementation of recommendations resulting from an investigation of system reliability of New Jersey's electric utilities. Assisted Board staff in the review and investigation of information supplied by the utilities (Conectiv, GPUE, Public Service Electric & Gas Company, Rockland Electric Company) in connection with implementation of the selected recommendations as ordered by the Board. Worked closely with BPU staff in reviewing implementation of recommendations 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, in which particular emphasis was placed on activities to improve and/or maintain CAIDI and SAIDI indicators at acceptable levels, including 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 three consultants in roughly 900 hours of effort during a 5-month effort for a total project cost of approximately \$221,000.

Illinois Commerce Commission
Springfield, Illinois

May 1999 – March 2000

Mr. Ken Kirchner
Consumer Counselor
527 East Capitol Avenue
Springfield, IL 62701
(217) 785-8438
kkirchne@icc.state.il.us



Designed survey to measure customer satisfaction with electric service reliability and quality, clarity of billing, rates, and services. Provided an Electric Service Customer Satisfaction Survey Rules to instruct electric service providers to administer the survey and to understand, interpret, and present its results. Conducted workshops to train electric service providers to implement the customer satisfaction survey. This assignment involved five consultants in approximately 750 hours of effort during a 10-month period for a total project cost of approximately \$130,000.



ELECTRIC UTILITY ASSIGNMENTS

City of Sturgis
Sturgis, Michigan



April 1997 – January 1998

Mr. John Griffith
Department Superintendent
130 N. Nottawa, P.O. Box 280
Sturgis, MI 49091
(269) 659-7204

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 and (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 three consultants in approximately 620 hours of effort during a 7-month period for a total project cost of approximately \$60,000, with a strategic planning effort undertaken in January 1998.

Town of Middleborough
Gas & Electric Department
Middleborough, Massachusetts



December 1996 – February 1998

Mr. James Collins
Mr. James Smith (Retired)
General Manager
Middleborough Gas & Electric Dept.
32 South Main Street
Middleborough, MA 02346
(508) 946-3777

Performed a competitive assessment of the operations of this municipal gas and electric department, which 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

Coldwater, Michigan



November 1996

Ms. Sue Rubley
 Mr. Dwight C. Woodman (Retired)
 Director
 8 West Chicago Street, P.O. Box 469
 Coldwater, MI 49036-0469
 (517) 279-9531

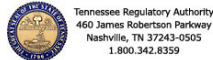
Developed, performed, and analyzed the results of a customer survey (a follow-up to a survey two years earlier) to assess satisfaction with the city utility and other city services. Three consultants worked about 200 hours over three months for a total project cost of approximately \$25,000.

Kingsport Power Company

Kingsport, Tennessee



February – September 1996



Mr. William H. Novak
 (formerly of Tennessee Regulatory Authority)
 now with Atlanta Gas Light
 (404) 584-4000
 Tennessee Regulatory Authority
 460 James Robertson Parkway
 Nashville, TN 37243-0505
 (800) 342-8359

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 in 700 hours of effort over four months.

Ms. Judy Gallo
 Senior Rate Coordinator
 American Electric Power Service Corporation
 1 Riverside Plaza
 28th Floor, Rate Department
 Columbus, OH 43215
 (614) 578-2209

Michigan South Central Power Agency

Litchfield, Michigan



December 1995 – June 1997

Mr. Glenn White
 Mr. Jack Bierl
 720 Herring Road
 Litchfield, MI 49252
 (517) 542-2346

Developed and implemented a relationship development (key accounts) program aimed at the larger commercial and industrial customers. We developed an ongoing communication/public relations program for the agencies, councils, and member communities. This project involved four consultants in approximately 1,600 hours of effort during an 18-month period, totaling about \$130,000, with follow-up assignments having been subsequently performed.



ELECTRIC UTILITY ASSIGNMENTS

Michigan South Central Power Agency

Litchfield, Michigan

***December 1994 – December 1995***

Mr. Jack Bierl
720 Herring Road
Litchfield, MI 49252
(517) 542-2346

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 and 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.

A 1935 Public Utility Holding Company

Confidentiality Requested

May 1995 – September 1995

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.

Hillsdale Utilities Department

Hillsdale, Michigan

***November 1994***

Mr. Rick Rose
45 Monroe Street, P.O. Box 271
Hillsdale, MI 49242-0271
(517) 437-3387

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.

ELECTRIC UTILITY ASSIGNMENTS

Pennsylvania Power & Light

Allentown, Pennsylvania

February 1993 – June 1994

Mr. Tom Sheets
 Pennsylvania Public Utility
 Commission
 Bureau of Audits
 400 Third Street
 Commonwealth Keystone Bldg., P.O. Box
 3265
 Harrisburg, PA 17105-3265
 (717) 783-5000

Mr. William Hecht
 Chairman, President & CEO
 Pennsylvania Power & Light Company
 Two North Ninth Street
 Allentown, PA 18101-1179
 (610) 774-5151



Performed a stratified management review, beginning with an initial diagnostic review of all functional areas in the PP&L organization. This was followed by in-depth investigation of 23 issues pre-identified by the PAPUC and PP&L, including affirmative action/EEO programs; salaries, wages, and benefits; staffing plans and levels; corporate-wide information technology; nuclear decommissioning; power plant materials management; a competitive assessment of in-house construction; and maintenance workforces. Found, for example, that PP&L had been unable to achieve its objectives for improving its information technology and systems. Made 18 major recommendations were made, including detailed steps necessary for bringing technology up-to-date. PP&L accepted 153 of 156 recommendations and within a month implemented 30 and 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 engagement involved over 20 consultants and 9,000 to 10,000 hours for a total project cost of approximately \$911,300.

Central Maine Power Company

Augusta, Maine

February – September 1993

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



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 engagement involved seven consultants and about 2,500 hours for a total project cost of approximately \$242,400.



ELECTRIC UTILITY ASSIGNMENTS

Toledo Edison Company
Cleveland Electric Illuminating
Company

Columbus, Ohio



Investigated the fuel procurement policies and procedures for fossil and nuclear fuels and provided testimony on the findings and conclusions.

Phase I: August 1991 – December 1991

Phase II: August 1992 – December 1992

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

Public Service Electric and Gas

Newark, New Jersey



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 ten months.

March 1991 – December 1991

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

City of Niles
Utilities Department

Niles, Michigan



April 1991 – June 1991

Mr. Bernard A. Van Osdale (Retired)
 City Administrator
 City of Niles
 508 East Main Street
 Niles, MI 49120
 (269) 683-4700

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.

ELECTRIC UTILITY ASSIGNMENTS

Arkansas Public Service Commission

Little Rock, Arkansas


April 1991 – February 1992

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

Trained Arkansas Public Service Commission (APSC) members in 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 prepared by the 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 for a total project cost of approximately \$95,000.

West Texas Utilities Company

Abilene, Texas


December 1989 – October 1990

Mr. Richard Greffe
 Assistant Director
 Public Utility Commission of Texas
 1701 North Congress Avenue
 Austin, TX 78711
 (512) 458-0338

Mr. Dennis Sharkey
 Vice President Administration
 West Texas Utilities Company
 301 Cypress Street
 Abilene, TX 79601
 (915) 674-7000

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, and of 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 ten consultants for 4,500 hours for a total project cost of approximately \$451,160.



ELECTRIC UTILITY ASSIGNMENTS

Central Maine Power Company

Augusta, Maine


July 1990 – October 1990

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. Robert Connell
 Mr. Wilbert Whitney
 Central Maine Power Company
 83 Edison Drive
 Augusta, ME 04336
 (207) 623-3521

Performed a focused management review of the implementation for 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, due to mismanagement at CMP. This four-month assignment included two consultants and approximately 500 hours for a total project cost of approximately \$48,800.

***Ohio Power Company
 Columbus Southern Power
 Company***

Columbus, Ohio


December 1988 – March 1990

Mr. Ray Strom
 Project Coordinator
 Public Utilities Commission of Ohio
 180 East Broad Street
 Columbus, OH 43215-3793
 (614) 466-7534

Mr. Paul Daley (Retired)
 Director Rates Department
 AEP Service Corporation
 1 Riverside Plaza
 Columbus, OH 43215
 (614) 687-3033

Reviewed the fuel-related practices and procedures of these companies for two consecutive years, including overall organizational structure, management decision processes, and the computer information systems supporting these activities. Provided testimony on our findings and conclusions. This 12-month review involved three consultants and more than 1,000 hours.

ELECTRIC UTILITY ASSIGNMENTS

Union Light, Heat and Power Company

Cincinnati, Ohio



October 1988 – August 1989

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

Performed a management and operations review of ULH&P, a subsidiary of Cincinnati Gas and Electric Company. Essentially run as a single company, our review covered all areas of both operations, including management and organization, electric operations (excluding power production and fuels management), gas supply and operations, customer services, 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 for a total project cost of approximately \$250,000.

GAS UTILITY ASSIGNMENTS

Enbridge

Toronto, Canada



April 2004 – July 2004



Mr. Eric Kobosh
 Mr. Andrew Benedict
 Opvantek
 28 South State Street, 2nd Floor
 Newtown, PA 18940
 (215) 968-7790
vantage@vantage-mgt-solutions.com

Collaborated on a multi-million 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***

Newark, New Jersey


***Elizabethtown Gas
Company***
NUI Corporation
New Jersey Natural Gas Company
New Jersey Resources Corporation
South Jersey Gas Company
South Jersey Industries Corporation
July 2000 – October 2000

Mr. Jim Rekulak

Principal Utility Mgmt Analyst

New Jersey Board of Public Utilities

Two Gateway Center

8th Floor

Newark, NJ 07102-5003

(973) 648-4516

rekulak@bpu.state.nj.us

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 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. We offered our expert opinion, based on appropriate methodology, as to whether there was 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. The audits determined whether there was (1) 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 was reasonable based on the New Jersey Board of Public Utilities (BPU) 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) ensured compliance with New Jersey legislation. The audits provided the BPU with the information needed to determine whether the competitive services identified are in any way cross-subsidized by the individual utility's regulated activities and to 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 five consultants in approximately 1,700 hours of effort during a 3-month effort for a total project cost of approximately \$357,000.

GAS UTILITY ASSIGNMENTS

***Pacific Gas & Electric
Company***

San Francisco, California


June 1994 – September 1994

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

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. We also provided 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, ensuring an equitable distribution of costs between regulated retail customers and unregulated project shippers. Seven consultants spent approximately 1,500 hours over four months in which Schumaker & Company was one of the subcontractors.

***Pennsylvania Gas & Water
Company***

Wilkes-Barre, Pennsylvania


April 1992 – May 1993

Mr. Thomas Sheets
 Pennsylvania Public Utility Commission
 400 Third Street
 Commonwealth Keystone Bldg., P.O. Box 3265
 Harrisburg, PA 17105-3265
 (717) 783-5000

Mr. Robert Lopatto
 Pennsylvania Gas and Water Company
 One PEI Center
 Wilkes-Barre, PA 18711-0601
 (717) 829-8600

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.



GAS UTILITY ASSIGNMENTS

Philadelphia Gas Works

Philadelphia, Pennsylvania

***1991***

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

Performed a follow-up review two years after a management and operations review that involved reviewing results of additional studies recommended during the management audit and developing a request for proposal for long-term strategic options.

***Baltimore Gas & Electric
 Columbia Gas of Maryland.
 Washington Gas Light***

Baltimore, Maryland

***March 1988 – June 1990***

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

Performed a two-year review of gas supply and purchasing practices. This unique project included formal training of Maryland Public Service Commission 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 for a total project cost of approximately \$99,880

GAS UTILITY ASSIGNMENTS

Western Kentucky Gas

Owensboro, Kentucky

***April 1989 – December 1989***

Mr. Aaron Greenwell
 Audit Manager
 Kentucky Public Service Commission
 211 Sower Blvd., P.O. Box 615
 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

Performed a management and operations review that covered all areas of this gas company's operations: management and organization, gas supply and operations, customer services, 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 was 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 for a total project of approximately \$343,360.

Philadelphia Gas Works

Philadelphia, Pennsylvania

***March 1989 – November 1989***

Mr. Thurman Bullock
 Commissioner, Philadelphia Gas Commission
 1515 Arch Street, 9th Floor
 Philadelphia, PA 19102
 (215) 686-6682

Mr. Dennis Stinson
 Philadelphia Gas Works
 800 West Montgomery Avenue
 Philadelphia, PA 19122
 (215) 684-6314

Reviewed all operational areas, including organization structure and planning (corporate policy, philosophy, 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 for a total project cost of approximately \$400,000.



TELECOMMUNICATIONS ASSIGNMENTS

Verizon New York

New York, New York



**October 2003 –
September 2004**



Mr. John Coleman
Service Quality Audit Project Manager
Office of Telecommunications
New York Office of Public Services
Three Empire State Plaza
Albany, NY 12223-1350
(518) 486-2947
john_coleman@dps.state.ny.us

Mr. Dick Jasinski
Project Liaison
Verizon New York, Inc.
1095 Avenue of the Americas
New York, New York 11530
(212) 395-5186
dick.jasinski@verizon.com

As a subcontractor, Schumaker & Company consultants held *Project Manager, Lead Consultant, and Senior Consultant* positions to perform a review and evaluation of Verizon NY's efforts to provide retail service quality that consistently met the requirements of the New York telephone service standards, as required by the New York Public Service Commission (PSC). In February 2002, the PSC ordered Verizon NY to institute a retail service quality plan, so named the Verizon Incentive Plan (VIP). After comparing 2002 service results with the same period in 2003, results generally declined and the PSC ordered an investigation to be conducted to review Verizon NY's retail service quality effort from four perspectives: performance, analysis, capital expenditures and maintenance, and best practices.

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. This one-year assignment involved 11 consultants (of which Schumaker & Company provided four) and required over 6,900 hours for a total project cost of approximately \$1,600,000.

VIII. Statement of Potential Conflicts and Other Items

This section is presented in two parts: First, a Potential Conflict of Interest Statement, and second, a Terms and Conditions Section that groups in one place a number of certifications, terms, and condition statements that are specified or suggested in various places in the request for proposal (RFP), or which Schumaker & Company (SCHUCO) wishes to submit at this time.

A. Potential Conflict of Interest Statement

There are no current relationships between SCHUCO, its team members or subcontractors, with the New York Public Service Commission, Consolidated Edison Company of New York (ConEd), or any known affiliate or otherwise related organization.

In the past, several SCHUCO consultants who are included in this ConEd proposal have served the NYSDPS, including the performance of the service quality review of Verizon NY. We have also served various other state regulatory bodies in the conduct of management and operations audits of other electric and gas utilities in which the scope of our review included emergency preparedness reviews.

Emergency Preparedness Partnerships has assisted several different Northeastern electric and gas utilities in various aspects of their emergency response. As a result, we need to disclose that during the past two years, Emergency Preparedness Partnerships has done the following work with ConEd and their subsidiary company Orange and Rockland.

- ◆ Con Edison – Provided professional consulting services in support of their business continuity and emergency response exercise planning program. This was a focused project only on the annual drills, which was much smaller in scope than this proposal. This project is complete.
- ◆ Orange and Rockland – Provided an assessment of their electric system emergency plan and identified strategies to enhance response by organization and management. This was a focused assessment of their plan, which was much smaller in scope than this proposal. This project is complete.

SCHUCO and EPP recognize that, if we are awarded this project, our project team will be prohibited from doing work for ConEd during the audit, or for a two year period, without prior written authorization from the New York State Department of Public Service.

No member of SCHUCO's or Emergency Preparedness Partnership's (EPP) consulting staffs has any current relationship with ConEd or any known affiliate or otherwise related organization. SCHUCO believes that no real or perceived conflicts of interest exist between it (or any of its team members or subcontractors) and ConEd or any of its affiliates. We are prepared to provide an objective,

independent assessment of the ConEd emergency plan and operations, as specified in the RFP and as we have done on numerous past audits.

Our project teams' industry experience in emergency preparedness that has been gained by working directly for utilities (as employees and consultants) and as consultants hired by third parties (primarily state regulatory commissions) makes our project team uniquely qualified for this assignment.

Furthermore, our project team is bound by the Code of Ethics of the *Institute of Management Consultants* that was provided behind the cover letter to this proposal.

B. Terms and Conditions

As a general statement, the RFP for the forthcoming review of Consolidated Edison Company of New York's Electric Emergency Outage Program was written clearly and well. Except as noted in this proposal, SCHUCO is prepared to accept terms and conditions expressed therein.

All staff persons listed in *Chapter V – Consulting Staff Organization* of this proposal will be available for the duration of the Consolidated Edison work. No staff substitutions will be made without prior written approval.

SCHUCO carries public liability and worker's compensation insurance in amounts that have been considered adequate by all commissions which SCHUCO has served. Proof of insurance will be submitted prior to starting the work.

We agree to stand behind our conclusions and recommendations by testifying, if necessary, in the hearing anticipated for this Docket, and for any future evidentiary proceeding or other hearing. We will provide such testimony at the rates stated in this proposal for a period of twelve months after completion of this work. Thereafter, testimony will be provided at rates then in effect.

SCHUCO is an equal opportunity employer and conforms to all relevant federal guidelines and statutes.

SCHUCO will request from Con Edison such documents, data, or statistical information as may be determined to be necessary for the performance of the work described herein which is available in company records and files. SCHUCO will also obtain, gather, and collect such information as may be required from other sources. ConEd will provide any required software licenses and data collection resources for data not available in SCHUCO's prescribed format.

SCHUCO will channel all requests, reports and all other communications in connection with this contract through the NYSDPS *Project Coordinator*.

SCHUCO understands that the NYSDPS is the client; the client is represented in all dealings with SCHUCO by a designated *Project Coordinator*. SCHUCO will operate as an independent contractor and

will carry out this assignment under the general guidance and coordination of the Commission. The NYSDPS *Project Coordinator* will be the sole contact in any discussions with the Commission. SCHUCO is willing to work with NYSDPS Staff in the manner described in the RFP.

SCHUCO will maintain a log of all interviews and site visits requested, scheduled and/or conducted, and shall permit access to this log by NYSDPS Staff, and if approved by the NYSDPS, by the Company.

SCHUCO commits to start work promptly after the award of the engagement, and a contract is signed. We will pursue the work with diligence and make every effort to meet target dates.

SCHUCO will require approximately 500 square feet of office space, with three to four desks (or equivalent table space), two lockable file cabinets, and one additional table for setup of an on-site computer workstation and a printer. In addition, we will need two telephones with long distance capabilities. We will also require access to a copier and a fax machine while on-site.

In addition, 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 ConEd's LAN with a firewall that permits VPN connections, or through a totally separated high speed connection to the Internet (DSL or fractional T1).

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

SCHUCO accepts all terms and conditions specified in the RFP that are not otherwise stated in this section or elsewhere in this proposal.

This proposal is SCHUCO's firm offer to conduct a review of the Electric Emergency Outage Program of ConEd. This offer shall remain valid for 180 days.