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**A Proposal To Perform  
A  
Independent Audit  
Of  
Consolidated Edison Company  
For  
New York Public Service Commission**

**November 20, 2006**



November 20, 2006

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

Dear Ms. Brillling,

Vantage Consulting, Inc. is pleased to respond to the 'Request For Proposal' to perform an Independent Review on the Performance of Consolidated Edison Company (Con Edison or the Company) Electric Emergency Outage Program of New York, Inc. for the New York Public Service Commission (Commission).

In preparing this proposal, we wish to emphasize our willingness to work with the Commission to reach the required results in an efficient, cost effective, and non-intrusive manner. Our firm is staffed by professional consultants who have conducted numerous similar assignments with great success

This proposal shall remain valid throughout the length of the project. We will comply with all conditions and provisions as stated in the RFP. We will stand behind our findings, conclusions, and recommendations by testifying, upon request by the Commission, in any hearing before the Commission. Vantage Consulting Inc., will comply with all applicable New York ordinances.

Included with this proposal package are copies of two relevant Vantage reports: *Stage I Investigation of Commonwealth Edison System Outages for Illinois Commerce Commission* and *Indianapolis Power & Light Company Service Quality Report*. These two reports provide an overview on the quality of our work.

Please feel free to contact us with any questions. I can be reached directly at (305) 744-3440 or by e-mail at [wdrabinski@vantageconsulting.com](mailto:wdrabinski@vantageconsulting.com).

Very truly yours,

Walter P. Drabinski  
President

# Perform an Independent Review of Consolidated Edison Company (ConEd) of New York's Electric Emergency Outage Program

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# 1. INTRODUCTION

Vantage Consulting, Inc. (Vantage) is pleased to respond to the request for proposal by the State of New York Department of Public Service (NYSDPS) to Perform an Independent Review of Consolidated Edison Company (ConEd or the Company) of New York's Electric Emergency Outage Program. We should note that neither Vantage Consulting, Inc., nor any of its consultants have any conflicts of interest with Consolidated Edison.

## A. GENERAL APPROACH

In responding to this Request for Proposal Vantage will try to be brief, yet still provide the information needed to make an informed decision by NYSDPS. We have made a number of decisions in preparing this proposal. First, our preliminary work plan is relatively brief and is provided in the form of a Work Breakdown Structure (WBS). We have added some additional work steps to the various areas, but agree that a detailed work plan be developed as the first step in the project after orientation and discussions with Staff.

Similarly, while we have specified which consultant will have responsibility for specific tasks and work steps, we are also identifying additional personnel for the assignment should the work load change or should changes in personnel be required. We have identified our proposed project team by work area, and will further designate specific resources once the work plan is further defined.

Our "not -to-exceed" cost proposal is based on our understanding of the work we are likely to encounter and our years of experience performing similar assignments. We understand that any testimony will be billed as additional costs at the individual rates of the Consultants used.

## B. RELATED EXPERIENCE

This is exactly the type of assignment Vantage focuses on. During the last decade Vantage has performed numerous general management audits, as well as focused audits that address reliability, budgeting, communications, new technology implementation, etc. Further, some of the consultants that have joined our team most recently, come with direct experience in the areas addressed here. Specific examples of recent Vantage assignments include:

- **Indianapolis Power & Light Performance Monitoring** - On this three-year assignment, Vantage consultants assessed and monitored actions by IPL to improve its reliability. This work included oversight of the installation of a new SCADA system, tracking of SAIDI, SAIFI, and other performance measures, Outage Management System software installation, evaluation of responses to storms, and evaluation of Call Center performance. The net result was a dramatic improvement in measured reliability and preparedness.

- **Commonwealth Edison** - the Illinois Commerce Commission retained Vantage to conduct a detailed assessment of numerous outages that occurred during the summer of 1999. Similar to ConEd, a number of heat and weather related events resulted in a stressed system failing catastrophically. Vantage evaluated each of the failures and developed recommendations for improvement. Our analysis was extremely in-depth and addressed equipment failure and system network design. Ultimately, Commonwealth Edison committed to spending over \$1 billion on system upgrades.
- **California ISO Operational Audit** - The FERC retained Vantage to perform an operational audit of the ISO during the California energy crisis. This crisis resulted in rolling outages due to shortages in electricity, transmission capacity and adequate planning and coordination. Vantage consultants reviewed a broad range of outage planning scenarios and plans.
- **Islands of St. Vincent and Curacao** - The Governments of these two islands retained Vantage to investigate widespread reliability problems and to propose solutions. Our consultants, working within the restraints of the infrastructure available, made numerous recommendations for changes.
- **General Management Audits** - Vantage consultants have reviewed the areas to be addressed on this assignment during the course of conducting over 50 general and focused management audits.
- **San Diego Gas & Electric PBR** - Vantage was retained by the California PUC to evaluate and monitor system performance based rates program implemented by SDG&E. Vantage reviewed and analyzed a number of performance characteristics of the SDG&E system and integrated them into the formula for calculating results and establishing rate incentives.

### C. PROJECT TEAM

In selecting a project team, we recognized that this assignment would require a combination of skill sets that must be integrated for maximum effectiveness. For inclusion on the team, our consultants must have the following prerequisites: relevant experience in the task assigned; experience working with other members of the team; and superior analytical and writing skills. In addition, our teams must be capable of working with the Commission Staff on an on-going basis. Using these criteria, we selected the following team.

Name	Title	Office Location
Walter P. Drabinski, BSEE, MBA	Project Director	Vantage Consulting, Inc.
Dr. Howard Axelrod, PhD, BSEE, MSEE, MBA	Senior Consultant	Energy Strategies, Inc.
Mark Fowler, BSME, MBA	Senior Consultant	Vantage Consulting, Inc.
Chuck Buechel, BS, MA	Senior Consultant	Vantage Consulting, Inc.
Martha King, CPA, BBA	Senior Consultant	Vantage Consulting, Inc.
Richard Mazzini, MS, BEE	Senior Consultant	Vantage Consulting, Inc.
Don Palys, BSEE, PE (NYS)	Senior Engineer	Vantage Consulting, Inc.
Michael Boismenu, BSEE, MBA, PE (NYS)	Senior Engineer	Vantage Consulting, Inc.
Doug Tully, BSEE	Senior Engineer	Vantage Consulting, Inc.
Jacqueline Squilletts	Project Administrator	Vantage Consulting, Inc.

**Mr. Walter P. Drabinski, President of Vantage Consulting, Inc.** - will serve as the Project Director for this assignment, he has managed over one hundred comprehensive and focused utility assignments of varying magnitude and importance during his 23 year tenure as a management consultant. His specific qualifications for this assignment include:

- Project Director on an audit of the Call Center and Reliability results reported to the Indiana Commission by Indianapolis Power and Light (IPLCO) under specific penalty provisions;
- Project Director on a review of Commonwealth Edison reliability issues that arose as a result of major outages experienced during the summer of 1999;
- Lead Consultant on management audits addressing power supply, operations, T&D, Customer Service, affiliate rules, finance and IT as part of comprehensive management audits of 40 utilities;
- Audited T&D related Performance Based Ratemaking for San Diego Gas & Electric Company;
- Project Director on a review of Seattle City Light's performance, governance, and financial stability during the "California Crisis" and an assessment of the preparedness going forward;
- Project Director on recent operational audit of California ISO for FERC. Addressed market design, governance, and other operational issues. Evaluated generation models, procurement plans and emergency activities. Testified before House of Representatives subcommittee on major issues of the energy crisis;
- Performed an unbundling and cost of service study of Public Service Electric & Gas' generation, transmission, and distribution prior to restructuring. Also, analyzed stranded costs and the prudence of construction projects;
- Managed audits of affiliate transaction on 12 assignments, including Entergy, SEMPRA, PG&E, PSE&G, Duquesne Light Company, and Louisville Gas & Electric;

- While with Niagara Mohawk Power Company, construction manager on 115KV and 345KV transmission lines. Later became Electrical Maintenance Supervisor responsible for fossil, nuclear, and hydro facilities in Oswego, NY. Also was Director of Training with responsibility for all technical and management training of generation personnel.

**Dr. Howard Axelrod** has more than 30 years of experience in management consulting, strategic planning and marketing for electric and gas utilities. With proficiencies in economics, marketing, and power systems planning, he provides a multi-disciplinary approach to resolving complex business and regulatory issues. He has performed numerous studies and led in the development of strategies addressing such issues as competitive restructuring, strategic business and market planning, organizational development, and business risk analysis. Dr. Axelrod also provides training seminars on risk and uncertainty assessment for such applications as power contract management, generation portfolio assessment, energy trading and derivative valuation and new business ventures.

Dr. Axelrod currently serves as the Executive Director of CCAS (Coalition for the Commercial Application of Superconductors), a technology-based trade organization. Dr. Axelrod is working closely with developers of advanced transmission and distribution technologies as well as the DOE and its associated national laboratories. Dr. Axelrod was also Professor of Economics (Adjunct) at Rensselaer Polytechnic Institute (1980 -1982) and Russell Sage College (1982 -1983). He was also a guest lecturer at Colgate University on Energy and the Environment (1998)

Dr. Axelrod has extensive regulatory and consumer advocacy experience. He served as a senior staff advisor to NYPSC Chairmen Joseph Swidler and Dr. Alfred Kahn and then as the Director of Utility Intervention for the New York Consumer Protection Board. He also served as the Governor's chief energy economist on the Shoreham Commission. Dr. Axelrod managed the intervention of over 300 electric, gas and telephone rate cases as well as numerous state mandated electric generation planning proceedings.

Recent assignments include the following.

- For the *New York Independent System Operator's Board of Directors*, Dr. Axelrod performed an enterprise risk management review which addressed all aspects of the ISO operations as well as organizational and operational requirements for its transition to a regional transmission organization.
- For *Edison Electric Institute*, Dr. Axelrod supported the assessment of issues relating to Standard Market Design with an emphasis on resource adequacy and transmission planning. He also facilitated the development of EEI's principles associated with regional transmission organizations.
- For *Santee Cooper Power*, Dr. Axelrod prepared an economic analysis of decommissioning expenses associated with the W. C. Summer nuclear plant. This study supported Santee Cooper's compliance with FASB 143 requirements for long lived assets by deriving the livelihoods associated with each decommissioning scenario.

- For *NOAA*, Dr. Axelrod recently completed an assessment of the impact of weather forecasting on natural gas procurement strategies for large commercial customers.
- For a major *Northeast utility*, Dr. Axelrod has supported the development of its restructuring plan as well as the assessment of all the major restructuring plans in New York, Pennsylvania, Massachusetts and New Jersey.
- For a *DTE (Detroit Edison)*, Dr. Axelrod trained its strategic planning staff to evaluate risk and uncertainty associated with the company's portfolio of regulated and competitive business ventures.
- For a *New England based electric cooperative*, Dr. Axelrod supported the development of a financial risk model to be used to assess the uncertainty of the New England energy markets.
- For several *regulatory clients*, Dr. Axelrod provided technical and analytical support relating to the development of the Regional Transmission Organization, Desert Star, the Translink ITC and transmission expansion planning at the New England ISO.

For *The Energy Authority (TEA)*, jointly owned by Jacksonville Electric Authority, the Municipal Electric Authority of Georgia and Santee-Cooper, Dr. Axelrod served as senior energy economist and performed an independent assessment of the Authority's settlement and operating procedures. TEA is a FERC approved electric marketer and operates the largest "customer-owned" electric trading floor in the United States. Dr. Axelrod also served as a strategic advisor providing independent and objective assessment of TEA's operating procedures and risk management activities.

**Mr. Mark D. Fowler** – As a Senior Consultant with Vantage, he has more than 20 years of experience in the utility and energy industry as both a utility company manager and a management consultant. His functional expertise encompasses many areas of utility and energy operations including billing and call center information systems, field and call center operations, and support services. In addition to consulting, Mr. Fowler has worked as an employee in the electric generation, utility software and gas liquids, and pipeline industries. His experience includes staff and line positions performing such specific duties as post acquisition business unit integration, operations improvements, work management software integration, and the management of line operations. Mr. Fowler has performed over 45 consulting assignments, almost all of which have been in the utility and energy industries. Some of the assignments he has conducted that are directly related to this project include the following.

- Recently performed a review of the call center and OMS at IPALCO as part of a review of the Company's performance and reporting.
- Senior Consultant on a review of Seattle City Light's performance during the "California Crisis" and an assessment of the preparedness going forward.
- Development of service standards for the Public Utility Commission of Ohio.
- Senior Consultant in the review of PSE&G's Restructuring Plan for the New Jersey Board of Public Utilities where he analyzed financial and affiliate issues.
- Senior consultant on audit of PSE&G affiliate rules.



Part of the Vantage consultant team that conducted a comprehensive management audit focused on distribution issues of Commonwealth Edison for the ICC. Conducted a separate investigation of the Company's electric transmission and distribution reliability. Included interviews, review of maintenance practices and aging of equipment, measurements of reliability, and programs for improving reliability.

**Mr. Chuck Buechel** - has over 25 years experience in the regulated utility industry. From 1979 to 1989, he was a member of the Staff at the Kentucky Public Service Commission. During that time, he progressed from Economist to Deputy Executive Director. As a consequence, Mr. Buechel lends a unique regulatory and theoretical perspective to our team. He has worked on several consulting engagements for state and federal regulatory commissions as well as investor-owned and cooperative utilities. In addition, he taught economics and finance classes at Morehead State University. He has worked on over a dozen Vantage assignments, including. His assignments have included the following.

- Assisted on several comprehensive management audits including Pennsylvania Gas and Water Company, West Texas Utilities Company and Columbia Gas of Ohio. All of these projects were Commission-ordered audits. Areas of responsibility included forecasting, financial management and planning, support services and rates and regulatory relations.
- Lead Consultant for an audit of the municipally-owned Seattle City Light electric utility. Assigned issue was governance of the municipal utility. The audit yielded recommendations for training the council members to better understand the issues and to add additional resources for oversight of the utility.
- Senior Consultant for affiliated audit at PG&E for 2001 through 2004 calendar years to verify compliance with California PUC restructuring requirements. Assignment included assessment of Company Plan and audit of affiliate transactions. Acted as the lead consultant on areas that addressed Non-discrimination Standards, Disclosure and Information Standards, and Competitive Services. Recommendations from these reports addressed means of improving compliance.
- Senior Consultant for an operational audit of the California Independent System Operator. The audit was performed for FERC. Assigned issues of primary focus were market design, the relationships among the parties and governance of the ISO.
- Senior Consultant for an audit of Indianapolis Power & Light's quarterly performance reports regarding its compliance with meeting agreed reliability targets.

**Ms. Martha King, CPA** - has more than thirteen years of experience in the electric, telephone, gas, and water utility industries. Ms. King has a broad range of experience in general management, with areas of specialization in finance, accounting, auditing, affiliated relations and transactions, analyses of fuel practices, analyses of past cash flows, and forecasting future cash flows. She also has extensive internal control and financial auditing experience for a manufacturing, financial services, and not-for-profit client base.

Ms. King was an Internal Audit Manager for T&N Industries, the North American headquarters for an international manufacturing company, located in Ann Arbor, Michigan. She was instrumental in the establishment of a new audit department. She was responsible for all of the audits and associated communication from the Company's headquarters to the international parent and the 30 North American subsidiaries. She was also responsible for all audit reports and their presentation to the Audit Committee. In addition, she coordinated and organized the North American Computer Disaster Recovery Program for North American subsidiaries and was responsible for the department budgets.

Ms. King served as a Financial Analyst for New England Electric System, a large public utility holding company with 10 subsidiaries, including one wholesale and three retail electric utility companies. Previously to that, she was an Audit Senior for Ernst & Young, where she managed and coordinated numerous audit engagements, including internal control reviews. Ms. King has a B.B.A. from the University of Michigan and holds a C.P.A. from the State of Michigan.

**Mr. Richard A. Mazzini** –possesses a wealth of experience in both the conduct of management audits as well as the challenges of utility management and operations. His more than thirty five years of experience have permitted him to serve as a consultant to energy companies and regulators in the U.S., Canada, Europe and the Caribbean. He is familiar with all elements of utility operation and specializes in organization analysis; competitive restructuring; strategic planning; governance issues; power marketing and risk management; tariff design and management; and venture analysis, development and startup.

Until 1995, Mr. Mazzini served in key management positions for more than 25 years for Pennsylvania Power & Light Company. During that time, he served as PP&L's Project Manager for the PAPUC's first stratified management audit.

Mr. Mazzini started his consulting career in 1995 and served in executive positions with ABB, the Washington International Energy Group and Navigant Consulting. He holds degrees from Villanova University and Columbia University and is a Registered Professional Engineer.

The most recent specific assignments by Mr. Mazzini that are relevant to this project include the following.

- The Seattle City Council and the Office of City Auditor to analyze governance, financial strategies, power marketing and risk management strategies.
- A FERC audit of the California Independent System Operator focusing on governance.
- An internally sponsored audit of the New York Power Authority covering management of risks associated with gas purchases and power sales.
- The Maryland Public Service Commission on the generation acquisition process for Standard Offer Service.
- A management audit of the electric utility of St. Vincent and the Grenadines.

**Mr. Donald R. Palys, P.E.** -Provides hands-on experience on this project regarding the engineering, construction, operation and maintenance of transmission and distribution physical equipment. His specific qualifications for this assignment include the following.

- Lead on assessment of NHPSC on reliability issues.
- He has served as a Manager and consultant in all multi-functional areas requiring design and implementation as Project Manager for construction projects developing electrical distribution system startup and support systems.
- He served as a representative for Pacific Gas & Electric at various manufacturers in attempting to maximize quality assurance of transmission and distribution equipment.
- His consulting experience at Westinghouse Electric, Black & Veatch, and independently, requires him to manage multiple turnkey construction projects for several utilities and industrial organizations. Some key activities included:
  - Studies, evaluations, and recommendations regarding fault characteristics; selection, application and coordination of protective devices; power factor; load flow; motor starting; power quality; resolution of operating problems; maintenance; and code compliance;
  - Planning, design, and specification of generation installations for emergency, standby, peak shaving, and combined cycle cogeneration;
  - Risk assessment for system and structure lightning exposure; passive and active protection;
  - Survey of voltage variation/regulation, surge protection, dip and sag override; and harmonic content;
  - Planning, conceptual design and specification of SCADA systems for process, facility, and energy conservation installations.

**Mike Boismenu** - Mike has extensive utility design and operating experience. For this assignment, we will call upon his past experience with Niagara Mohawk as Director of Value Engineering. In this capacity he provided leadership and direction for a multi-disciplined team of Company and Industry recognized experts. Some highlights include the following.

- The group's functions included development of programs that addressed Value Engineering, Engineering Standards, Reliability Engineering and Strategic Asset Management.
- He conceptualized and directed the development of an Automated Distribution Station Design System. Resulted in a significant reduction in electric station engineering and design time.
- Directed the automation of the Company's Engineering Standards resulting in a significant improvement in the Line Department's performance.

**Douglas Tully** - Electric utility veteran with diverse work experiences in Field Operations. (Construction, maintenance, operations and emergency restoration). Supervisor/Manager responsibilities have included: Electric Substations, Hydro Electric Generation, Relay & Telecommunications, Meter & Test, Field Service, Underground Network, Heavy Construction, Crane & Rigging Services, Street Lighting, Substation Design, and Electric &

Gas Distribution Design. As Manager, Energy Services - Western Division. He was responsible for a number of Field Operating units in Niagara Mohawk's, a National Grid Company, largest division. Key achievements included:

- Reorganization and efficiency improvements helped reduce staffing and department expenses approximately 30%;
- Lost Work Day Cases were reduced to zero in several departments. Recipient of several corporate and divisional awards;
- Worked on three major external audit/consultant teams charged with improving service reliability, operating efficiencies and customer satisfaction in New York Operations.

## 2. SCOPE AND OBJECTIVES

The RFP has provided a significant amount of information describing the reasons for this audit and the scope to be addressed. In preparing for this assignment, we have reviewed all of the available information and organized our work plan in a manner that addresses every requirement identified. We have also added a few areas for review that we believe are relevant. These areas are integrated into the work plan and will require minimal incremental time or effort, but should yield significant value.

### **Formal Scope of Proposed Audit (per the RFP and associated Orders).**

The Commission is concerned about the effectiveness of Consolidated Edison's Electric Emergency Outage Program based, in part, upon customer complaints regarding the Company's performance and in response to electric emergency outages in January 2006, July 2006 and September 2006. Effective and efficient electric emergency preparedness, mobilization, execution, effective communications with customers, and prompt restoration are essential in times of electric emergency outages, be they storm related or other electric system events. The broad parameters of the scope of this audit were identified in the Commission's September 8, 2006 Order:

*...the Commission determines that there is a need to initiate a proceeding and to conduct an independent audit of the Company's system-wide operations, practices and procedures as they relate to emergency planning, response to outages, and restoration of service.*

Specifically, the scope of the audit will consist of several elements of review of Consolidated Edison's electric emergency outage program:

1. 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.
2. 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.
3. 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. The audit should identify best practices that the company is or should consider employing in the area of electric emergency outage response, as well as opportunities for improvement.

The RFP provides a lengthy list of areas to be addressed. We summarize them here and then add a few areas in bold that we propose to add to the project scope. While this effort is

somewhat duplicative, the process permits us to organize the work effort into specific work steps.

## **ELECTRIC EMERGENCY OUTAGE 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 ensure that there is effective response and prompt restoration of electric service in response to an electric emergency outage.

Planning Process	<p>The review of the planning process should 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.</p> <p>Recent changes in the planning and response processes should be identified and assessed..</p>
Organizational Assessment	<p>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 and facilities, as well as resources from third party providers such as rental generators) that are available for electric emergency outages.</p> <p>With respect to the organizational structure, the audit should assess the reporting relationships established and the roles and responsibilities of organizations and personnel involved in electric emergency outage planning, response and restoration.</p>
Training	<p>Training is an important component of planning, and the audit will review and assess the adequacy of the Company's training efforts for electric emergency outages.</p>
Planning Criteria	<p>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</p>

	resources in an optimal manner.
Outage Data Collection	The audit should 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.
Load Reduction Planning and Models	The review should include an assessment of load reduction plans/policies incorporated in the Company's planning models and/or policies and procedures.
Large and Multiple Outage Response Plans	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.
Damage Assessment	The audit should 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.
Internal Communication Process	Consideration should be given to the internal communication process and the use of data information systems for restoration planning purposes.
Emergency Preparedness	The audit should 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.
Internal Communications	Consideration should be given to the internal communication process and the use of data information systems for restoration planning purposes.
Outside Information Sources	The audit will address the potential availability of information from other sources (e.g., cable TV providers) as to individual retail customers impacted by an outage.
Outside Utility Assistance	The audit should 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.
External Communications and	Finally, this aspect of the audit should ascertain if the

Outreach	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
<b>SCADA System Design and Effectiveness</b>	Evaluate the current and/or planned upgrades in the SCADA system. Identify all deficiencies that may hinder immediate data collection, analysis and response to outages.
<b>Call Center Software</b>	Determine if the Call Centers have software that evaluates the location and severity of outages. Also whether automatic replies are generated once the software has determined the source of the fault.
<b>Call Center Adaptability</b>	Determine if there are additional call center stations available at other locations that can be manned during serve emergencies. Also assess availability of staffing and related training for assisting during emergencies.

### **ELECTRIC EMERGENCY OUTAGES – PERFORMANCE/EFFECTIVENESS**

This aspect of the audit should review the Company's actual electric emergency outage performance including execution of its Emergency Response Plan.

There should be a 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.

Lessons Learned Analysis	The consultant should 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.
2006 Assessment Update	Where necessary, the consultant should perform an independent analysis of any aspect of the Company's performance during 2006 to make its assessment complete.
Personnel and Equipment	The audit should detail the effectiveness of the



Deployment	Company in deploying and managing personnel and equipment in the most optimal manner and its effectiveness in communicating information internally.
Activation of Policies and Procedures	The review should determine if the Company's policies and procedures were activated appropriately and ultimately followed.
Data Collection Accuracy	The review should 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.
Interruption Reporting System Review	The audit should 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.
Load Reduction Assessment	The audit should also assess the incorporation of network supply/load reduction actions taken by the Company to meet the emergency situation(s).
Outside Utility Assistance	The audit should also 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.
Outreach Effectiveness	Finally, this aspect of the audit should ascertain 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.
<b>Call Center Effectiveness</b>	Evaluate the effectiveness of the call center during both normal and emergency conditions.
<b>SCADA Effectiveness</b>	Determine whether the SCADA system in place during the recent outages performed as designed.

## **ELECTRIC EMERGENCY OUTAGE PLANNING – BEST PRACTICES**

This aspect of the review will require that the consultant indicate 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.

Best Practices Assessment	The consultant will be responsible for reviewing "best practices" of the industry to identify any significant differences in electric emergency response planning, response, restoration and communications that exist (between Consolidated Edison and (best practices) and the underlying reasons for such variances.
System Related Opportunities for Improvement	Additionally, the consultant will be expected to identify opportunities for improvements (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.
<b>Software Related Opportunities For Improvement</b>	Identify potential improvements in diagnostic software for the SCADA and Call Center systems.

### **3. APPROACH, METHODS, PROCEDURES, AND PROJECT MANAGEMENT**

#### **A. PROJECT CONTROLS**

We use several proven project management techniques that will enable us to manage this project while enhancing communications among the project team members, Staff and Company management while assuring confidentiality of key data.

#### **CONFIDENTIALITY**

Vantage recognizes that all information collected from the work processed under this contract must be treated with care to preserve any issues of confidentiality. Vantage and all employees involved on this assignment will sign the Non-disclosure and Use of Information Agreement upon award of the project. Further, Vantage will utilize its internal controls to assure all materials are handled in a manner that prevents inappropriate dissemination. Internal controls consist of:

- Vantage's PC-based network database system is secured through a series of passwords for each project. Only selected project consultants have the ability to access the information in the database system;
- All data stored at the Vantage office is kept in locked file drawers;
- All information used by consultants is collected at the end of the project and stored with other working papers, notes and drafts in a secure room;
- The Vantage network can be accessed through direct dial-up using a modem and passwords. The consultant or client is permitted access to limited areas of the network infrastructure, depending on security provisions. Using a password, the individual can upload or download files from prescribed sub-directories. The advantage of this system is that an individual can access any files needed without having them sent;
- Vantage also can use encryption software to ensure that the transmittal of files across the internet is secure. This method allows an individual to send or receive files that are encrypted. Only individuals with the same software and codes can then decode the files.

#### **INFORMATION REQUEST MANAGEMENT SYSTEM**

Throughout the course of the review, the team may submit a number of information requests. Efficiently managing outstanding information requests and those documents received are crucial to the success of the project. We use a PC-based system designed to

increase the efficiency of handling of all information requests. A copy of our information request form is provided below.

After the initial submittal, information requests will be submitted on separate forms and faxed or e-mailed to the Staff and Company Project Manager. Questions regarding definition of the requests by the Company will be facilitated by telephone discussions. In order to facilitate the timely completion of this fixed-price project, we anticipate receiving a response to most information requests within 10 working days.

*Exhibit III-1 - Information Request Form*

<b>Review of ConEd of New York's Electric Emergency Outage Program</b> <b>INFORMATION REQUEST FORM</b>	
<b>SECTION 1 - CONSULTANT</b>	
<u>REQUEST #:</u> <input style="width: 100%; height: 20px;" type="text"/>	<u>DESCRIPTION OF INFORMATION REQUIRED:</u>  <input style="width: 100%; height: 100px;" type="text"/>
<u>PRIORITY:</u> <input style="width: 100%; height: 20px;" type="text"/>	
<u>SOURCE REFERENCE:</u> <input style="width: 100%; height: 20px;" type="text"/>	
<u>REQUESTED FROM:</u> <input style="width: 100%; height: 20px;" type="text"/>	
<u>REQUESTED BY:</u> <input style="width: 100%; height: 20px;" type="text"/>	<u>WORKPLAN AREA:</u> <input style="width: 100%; height: 20px;" type="text"/>
<b>SECTION 2 - ADMINISTRATOR</b>	
<u>DATE REQUESTED:</u> <input style="width: 100%; height: 20px;" type="text"/>	<u>COMMENTS:</u>  <input style="width: 100%; height: 100px;" type="text"/>
<u>DATE DUE:</u> <input style="width: 100%; height: 20px;" type="text"/>	
<u>ACTUAL DATE RECEIVED:</u> <input style="width: 100%; height: 20px;" type="text"/>	
<b>SECTION 3 - COMPANY</b>	
<u>DOCUMENT TITLE:</u> <input style="width: 100%; height: 20px;" type="text"/>	<u>DOCUMENT RESTRICTION OR COMMENTS:</u> <input style="width: 100%; height: 20px;" type="text"/>
<u>DESIGNATION #:</u> <input style="width: 100%; height: 20px;" type="text"/>	<u>PERSON RESPONSIBLE, TEL. #:</u> <input style="width: 100%; height: 20px;" type="text"/>

*Exhibit III-2 - Interview Request Form*

<p><b>Review of ConEd of New York's Electric Emergency Outage Program</b></p> <p><b>INTERVIEW REQUEST FORM</b></p>	
<p><b>SECTION 1 - CONSULTANT</b></p>	
<p><u>INTERVIEW NUMBER:</u></p>	<p><u>CLIENT:</u></p>
<p><u>INTERVIEWEE:</u></p>	<p><u>TITLE OR FUNCTION:</u></p>
<p><u>REQUESTED BY:</u></p>	<p><u>OTHER CONSULTANTS/ ATTENDEES:</u></p>
<p><u>REQUESTED FROM:</u></p>	<p><u>INTERVIEW LENGTH:</u></p>
<p><u>TIME REQUESTED:</u></p>	<p><u>WORKPLAN AREA/TOPIC:</u></p>
<p><b>SECTION 2 - ADMINISTRATOR</b></p>	
<p><u>DATE SENT TO COMPANY:</u></p>	<p><u>ACTUAL DATE &amp; TIME:</u></p>
<p><u>COMMENTS:</u></p>	
<p><b>SECTION 3 - COMPANY</b></p>	
<p><u>INTERVIEWEE/TITLE:</u></p>	<p><u>DATE:</u></p>
<p><u>LOCATION:</u></p>	<p><u>TIME:</u></p>

## REPORT DOCUMENTATION

We have extensive procedures and PC-based software systems that permit us to:

- Footnote, annotate, and cross-reference the task, draft, and final testimony to our working papers and the detailed work plan, resulting in a complete documentation trail;
- Schedule and track interviews through a PC-based database system;
- Track the request and receipt of information requests through a PC-based database. Numerous summary and detailed reports permit project management and allow the client to assess company response rates.

Footnotes serve as the basis for annotating our reports, which we use to identify the source of information that supports a statement of fact, finding, conclusion, or recommendation. As policy, we require that every fact, quote, result of analysis, or other statement that can be challenged be footnoted.

## PROJECT DELIVERABLES

Deliverables for this project include both verbal and written updates as well as specific written report drafts, ultimately concluding with a final report. Specific expectations of deliverables will include:

- Regular verbal briefings of the Staff by the Project Director;
- Orientation meeting with Staff and ConEd personnel;
- Meetings regarding the detailed work plan development;
- Mid project briefing meeting(s) with Staff to review progress and findings to date; (One or more will be scheduled depending on circumstances.)
- Draft Report for delivery to the Staff for initial review;
- Updated Draft Report for ConEd to review;
- Final Draft Report with ConEd input considered;
- Final Report for submittal to the NYPSC;
- Work papers from project.

## **4. AREAS AND ISSUES FOR REVIEW**

### **A. PRELIMINARY WORK PLAN/WORK BREAKDOWN STRUCTURE (WBS)**

The proposed work has been organized into three task areas. The work steps stated in the RFP are enhanced with additional work steps for consideration. We propose that a final, detailed work plan be developed once the project is initiated.

Our format for presenting the work steps is through a Work Breakdown Structure (WBS) which correlates task areas, work steps, assigned consultants, initial hour estimates, initial data requests, and initial interviews. Ultimately this document will evolve and be updated by our consultant as they proceed with the project.



<b>ELECTRIC EMERGENCY OUTAGE PLANNING/PREPAREDNESS</b>					
<b>Work Area</b>	<b>Work Steps</b>	<b>Consultant Assigned</b>	<b>Budget Hours</b>	<b>Preliminary Data Requests</b>	<b>Initial Interviews</b>
Planning Process	<p>Review the planning process with personnel from T&amp;D, Customer Service and Engineering.</p> <p>Review budget priorities between Transmission &amp; Distribution (T&amp;D) projects and the methods by which they are set and coordinated.</p> <p>Determine if ConEd has a well-defined T&amp;D system planning processes which:</p> <ul style="list-style-type: none"> <li>- Integrates its IRP processes, and system reliability studies;</li> <li>- Identify planned new transmission, distribution, and substation construction projects, as well as rebuilds five years out;</li> <li>- Prioritizes and authorizes construction projects based on written criteria;</li> <li>- Incorporates approved projects into the overall construction program budget.</li> </ul> <p>Determine how Company budgets are related and developed based on NYISO requirements.</p>	Axelrod, Tully	200	<p>Copies of all O&amp;M and Capital Budgets that include planning information.</p> <p>Copy of any IRP that addresses reliability.</p> <p>List of all initiatives being considered to improve reliability along with analysis supporting or justifying the initiative.</p> <p>Proposed changes in budgets and projects due to recent outages.</p> <p>Details on all ISO construction requirements that address reliability.</p>	<p>Senior T&amp;D and Engineering management</p> <p>Planners from each District or Division</p>
Organizational Assessment	<p>Review and analyze ConEd's existing T&amp;D organization structure, processes and systems.</p> <p>Examine how the organization functions during emergencies and determine whether the workforce is adequately sized to ensure rapid service restoration.</p> <p>Review the adequacy of ConEd's current workforce to conduct required inspections, maintenance and testing of all facilities and infrastructures</p>	Mazzini	160	<p>Organization charts and staffing levels for all T&amp;D departments.</p> <p>Emergency operating procedures for all work crews.</p> <p>Assignments for all management employees during emergencies.</p> <p>Proposed changes in the organization in response to recent outages.</p>	<p>Senior T&amp;D management,</p> <p>Field Supervision,</p>
Training	<p>Review all training programs that address emergency preparedness.</p> <p>Determine if all appropriate employees are trained.</p>	Buechel	80	<p>Copies of training programs for field and management employees that address emergency preparedness.</p> <p>Training records for all employees showing what programs were taken that address emergency preparedness.</p>	<p>Training Manager,</p> <p>Program developers</p>

Planning Criteria	<p>Determine how priorities are set for new projects</p> <p>Review budget priorities between Transmission &amp; Distribution (T&amp;D) projects and the methods by which they are set and coordinated.</p> <p>Determine if the Companies have well-defined T&amp;D system planning processes which:</p> <ul style="list-style-type: none"> <li>- Integrates its IRP processes, and system reliability studies;</li> <li>- Identify planned new transmission, distribution, and substation construction projects, as well as rebuilds five years out;</li> <li>- Prioritizes and authorizes construction projects based on written criteria;</li> <li>- Incorporates approved projects into the overall construction program budget.</li> </ul> <p>Determine how Company budgets are related and developed based on NYISO requirements.</p> <p>Review project classes, i.e., reliability, overloads, new business. Relate the budgeting process to these categories. Review procedure for postponed, delayed or cancelled projects.</p> <p>Review all NYISO related construction plans.</p> <p>Review staffing levels, including contractor FTE's in engineering.</p> <p>Determine whether Company's has an adequate plan for addressing new growth areas.</p> <p>With respect to construction management activities:</p> <ul style="list-style-type: none"> <li>- Initially, determine if project management tools exist;</li> <li>- Assess the interfaces of the construction program planning process with other planning processes including strategic planning, financial planning, marketing planning, etc.;</li> <li>- Determine what post-project completion procedures (inspection, closeout and due diligence) are in place;</li> </ul> <p>Assess the accuracy of project management tools in use.</p>	Axelrod, Tully, Boismenu	200	<p>Copies of all planning criteria.</p> <p>Planning calendar</p> <p>Details on O&amp;M and Capital expenditure by district for the last five years.</p>	<p>Engineering and budget personnel</p> <p>Planners</p>
Outage Data Collection	<p>Determine how outage data is collected.</p> <p>Review automated systems and algorithms for assessing root cause or location of outages.</p> <p>Review outage data for accuracy in collection process and results.</p>	Buechel	80	<p>Copies of OMS description and operating procedure.</p> <p>Copy of source data for a sample of districts.</p>	Outage Management personnel
Load Reduction Planning and Models	<p>Review ConEd's distribution load forecasting process. Determine the current Companies forecast horizon and level of detail included.</p>	Mazzini	120	<p>Details on load forecasting process.</p> <p>Copies of all plans for the last three years with highlights on changes since recent outages.</p>	Load control personnel

	Determine and compare forecast versus actual load growth for the past five years and forecasted load five years into the future. Determine if adequate resources are/have been allocated to accommodate this growth. Review demand and energy forecasting methodology.				Planners Senior management
Large and Multiple Outage Response Plans	Review large and multiple outage response plans. Review any analysis of recent outage investigations.	Mazzini, Plays	64	Copies of any communication plans.	Outage management personnel
Damage Assessment	Review all details or reports on damage assessment form recent outages.	Boismenu, Palys	120	Reports and assessments of recent outages.	Engineering and repair personnel
Internal Communication Process	Evaluate internal communication process. Determine and prepare flow chart that illustrates responsibilities and information flow.	Mazzini	64	Copies of any communication plans.	Internal communication personnel
Emergency Preparedness	Evaluate the current procedures and systems utilized to facilitate orderly restoration of service due to any failure or emergency. Determine how crews are utilized during different types of emergencies. Review and determine the effectiveness of the Companies call-out system. Review the Company's storm restoration procedures and determine if effective responses have been provided for the five biggest storms during the last three years. Review the Company's storm restoration procedures and determine if effective responses have been provided for the five biggest storms during the last three years. Assess how Company's shares emergency service issues.	Axelrod, Mazzini, Buechel	240	Copies of all restoration plans Crew utilization plans	Outage management personnel
Outside Information Sources	Determine what sources of information are used for determining potential weather related problems	King	48	Details on weather data gathering and forecasting.	External Communication personnel
Outside Utility Assistance	Review and determine the effectiveness of the mutual assistance call programs	Mazzini	80	Details on mutual assistance programs.	Senior management
External Communications and Outreach	Review external communication programs Review any assessment of recent performance of external communication	King	64	Copy of all external communication plans Copy of external call list	External Communication personnel
<b>SCADA System Design and Effectiveness</b>	Review current SCADA system for capability. Determine whether it is a recent vintage system that assesses storm outages.	Fowler	80	Details on current SCADA system Details on any plans for changes in system	System operations

<b>Call Center Software</b>	Review call center software for effectiveness during storms	Fowler, King	120	Details on call centre software. List of call centers and staffing during normal and emergency periods.	Call Center management and supervisors
<b>Call Center Adaptability</b>	<p>Evaluate Average Speed of Answer performance.</p> <p>Review processes, technology, measurements and systems in place, including recent enhancements, and recommend additional appropriate enhancements.</p> <p>Review process improvement initiatives, including call center scheduling, new technology, etc.</p> <p>Evaluate the use of IVR technology.</p> <p>Confirm the validity of reported numbers by comparing switch data with ACD data.</p> <p>Perform random calls, and using the actual speed of answer, compare the reported data to the identical time frame.</p>	Fowler  King	80	Details on Call Center Performance System Descriptions.	Call center management and supervisors

<b>ELECTRIC EMERGENCY OUTAGES – PERFORMANCE/EFFECTIVENESS</b>					
<b>Work Area</b>	<b>Work Steps</b>	<b>Consultant Assigned</b>	<b>Budget Hours</b>	<b>Preliminary Data Requests</b>	<b>Initial Interviews</b>
Lessons Learned Analysis	Review all evaluations and reports from previous outages. Perform a gap analysis of reliability requirements vs. resource adequacy to determine if the Company has an adequate workforce to provide safe and adequate service to its customers.	Buechel, Mazzini, Axelrod	96	Copies of all outage reports Filings provided to Commission or Staff regarding recent outages	Range of management and field personnel
2006 Assessment Update	Review the Assessment Update	Buechel	24	Copy of assessment update	Planning and outage management personnel
Personnel and Equipment Deployment	Review ConEd's maintenance programs and their adequacy consistent with industry maintenance practices. The review will include maintenance policies for various types of equipment classes and individual types (substation, breaker, etc.), and will include the work of contractors, i.e. vegetation management, pole inspections, etc.  Determine if the policies are being followed in the field and whether they contribute to increased reliability and improved restoration of service.  Review Capital and O&M budgets to determine their adequacy for adequate reliability and restoration of service.  Review processes and systems to predict the need for maintenance, execution of the maintenance plan, recording the work and assets condition, and the follow-up for any additional work required.  With regard to vegetation management: - Review reporting practices vis-à-vis projects and contracts; - Determine the use of reports by appropriate management.  Determine the extent to which reports provide early indication of potential problems and the extent to which they facilitate corrective action.	Mazzini	40	Plans regarding Field Organization Policies on Staffing Descriptions of Maintenance Management Systems.	Senior management and field supervision
Activation of Policies and Procedures	Review correspondence and direction from Senior management that addresses reliability enhancement.	Buechel	48	Copies of all memos, speeches, or other forms of communication that address need for improved reliability.	Range of management personnel

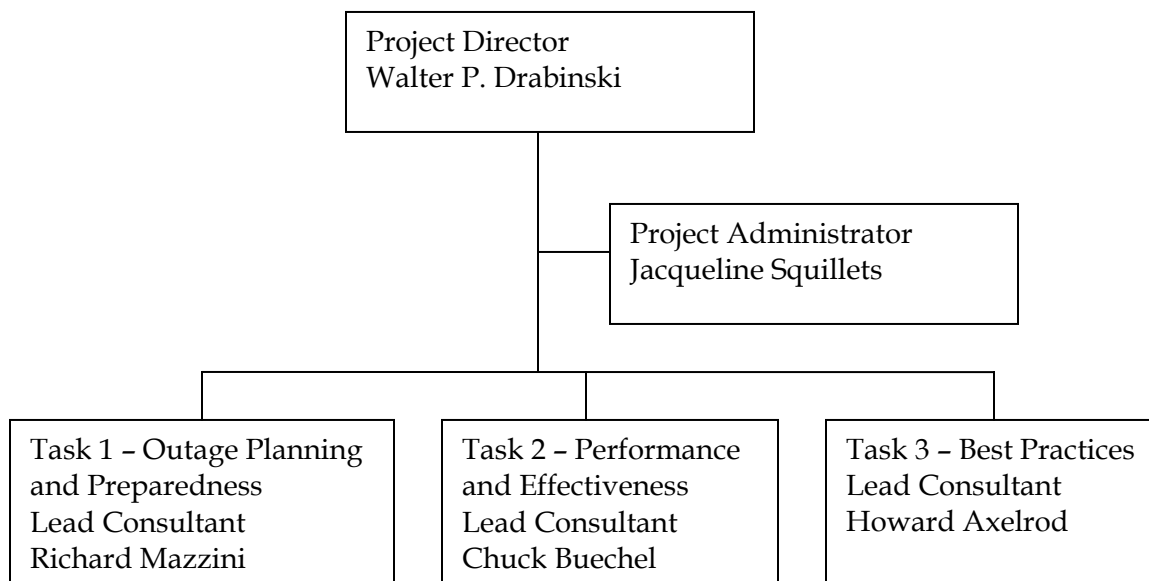
Data Collection Accuracy	Review the current reliability statistics for Company's, CAIDI, SAIFI and SAIDI, and the top ten causes of outages.  Review major disturbances for the last five years, (i.e. storms, hurricanes, heat waves), total numbers of customers affected, the percentage of the total customer base affected, loss categories, crews fielded, durations, etc.	Buechel, Fowler	80	Copy of all CAIDI, SAIFI and SAIDI, and other indices data for last five years by geographic area within the company.  Comparisons to other similar companies.  Data on all major outages caused by major disturbances for last five years.	Outage statisticians
Interruption Reporting System Review	Review all software and other systems that records system interruptions.  Review and analyses statistics of circuit interruptions over time.	Fowler, Tully	96	Description of all systems that collect interruption data.	Outage statisticians
Load Reduction Assessment	Review procedures and policy for load reduction.  Analyze how any recent load reductions were undertaken.	Axelrod	80	Load Reduction Policies. Five year history on Load Reduction.	Load control and operations management personnel
Outside Utility Assistance	Review policies and practices for use of outside utility assistance.  Evaluate specific cases of uses of outside crews.  Evaluate cost of using outside crews.	Tully	64	Details on all outside assistance requested for last five years	Management responsible for requesting assistance.
Outreach Effectiveness	Determine how outreach is undertaken and assess its effectiveness.	Fowler, King	80	Copies of all outreach programs.	External affairs personnel
<b>Call Center Effectiveness</b>	Assess how effective call centers are during times of emergency	Fowler, King	96	All call center standards and results	Call center personnel
<b>SCADA Effectiveness</b>	Companies should utilize an automated system control and data acquisition system (SCADA), that also supports its trouble-call tracking and outage analysis.  Determine how effective SCADA is during storms and emergencies.	Mazzini, Fowler	96	Details on SCADA effectiveness and limits	Operations management and technicians

<b>ELECTRIC EMERGENCY OUTAGE PLANNING – BEST PRACTICES</b>					
<b>Work Area</b>	<b>Work Steps</b>	<b>Consultant Assigned</b>	<b>Budget Hours</b>	<b>Preliminary Data Requests</b>	<b>Initial Interviews</b>
Best Practices Assessment	<p>Develop a list of measurement criteria that can be defined for a best practices assessment. These should be developed in conjunction with any Company studies or best practice tracking. Areas, as minimum should include:</p> <ul style="list-style-type: none"> <li>- Outage response times;</li> <li>- Call center performance;</li> <li>- Outage statistic performance (SAIDI, etc.);</li> <li>- O&amp;M and Capital Budget levels;</li> <li>- Engineering and Planning.</li> </ul> <p>Conduct search of industry to develop standards of best practices for each area identified.</p> <p>Develop a baseline assessment of ConEd's performance for each area.</p> <p>Develop targets for long-term performance.</p>	Buechel, Mazzini, Fowler, Axelrod, Boismenu	400	<p>Copy of any best practices material or analysis ConEd has performed or participated in.</p> <p>Copy of any industry data available that addresses best practices.</p> <p>List of peer utilities ConEd uses for comparisons.</p>	<p>ConEd personnel responsible for research and development,</p> <p>Best practice analyses.</p>
System Related Opportunities for Improvement	Prepare a list of system related opportunities for improvement based upon the current environment and identified best practices.	Buechel, Mazzini, Fowler, Axelrod, Boismenu	200	Any analysis on system equipment deficiencies.	<p>ConEd personnel responsible for research and development,</p> <p>Best practice analysis's,</p>
<b>Software Related Opportunities For Improvement</b>	Identify any software or hardware systems that are inadequate or antiquated and recommend changes or upgrades.	Buechel, Mazzini, Fowler, Axelrod, Boismenu	200	Details on software or hardware deficiencies on key systems.	<p>ConEd personnel responsible for research and development,</p> <p>Best practice analysis's,</p>

## 5. CONSULTING STAFF ORGANIZATION

### A. ORGANIZATION CHART

The Organization Chart below shows the proposed project management for this assignment. Individual consultant assignments are provided in the Work Breakdown Structure above.



### B. RESUMES

The following resumes have been provided for your review.



## RESUME OF MR. WALTER P. DRABINSKI

### SUMMARY

Mr. Drabinski is President of *Vantage Consulting, Inc.* He has more than 28 years of experience in the utility industry as both a utility company manager and a management consultant. His functional experience is tailored to this assignment. As a utility manager, Mr. Drabinski held the position of Supervisor, Electrical Maintenance for Niagara Mohawk Power Corporation. In this capacity he had responsibility for maintenance of a broad array of distribution and transmission equipment, including 115 KV underground transmissions. As a management consulting principal, he has managed more than 75 consulting engagements, including over 30 state regulatory commissioned audits. These have included management and operational audits of utility transmission and distribution systems as well as focused reviews of troubled distribution systems.

### SELECTED CONSULTING EXPERIENCE

The following are only a few of Mr. Drabinski's utility consulting assignments. A complete copy along with details as an expert witness will be provided upon request.

***PSE&G.*** – Project Manager and Lead Witness for an audit of the Company's Unbundling, Stranded Cost, and Restructuring plans and testimony. On this assignment, under the auspices of the New Jersey Board of Public Utilities, Vantage was the lead firm for a consortium of five consulting firms that addressed numerous critical and cutting edge issues. These included areas such as reconciliation of the regulatory and FERC books, development of cost of service studies, assessment of capital additions proposed for stranded cost recovery, calculation of market prices for energy and capacity, calculation of stranded costs associated with nuclear, fossil and non-utility generation, assessment of securitization as a mitigation option, and development of a comprehensive model that determined the possible rate reduction that could be achieved.

***Arizona Corporation Commission.*** – Provided assistance to the Commission Staff and Commissioners on all restructuring issues under consideration. This includes development of an ISO. The re-organization of co-operatives and G&Ts for deregulation. Development of solutions regarding high costs resulting from California related issues. Re-assessment of deregulation orders based on appellate decisions.

***Public Service Electric & Gas.*** – Engagement Manager during a long-term engagement with PSE&G. Specific assignments he directed include the following.

- Developed a 30-year environmental plan, addressing power generation and environmental strategy.

- Assisted in development of innovative rate strategy for Bergen combined cycle unit.
- Worked on a team of utility employees, lobbyists, legislative staff members and the DOE to develop a program for voluntary reduction of CO<sub>2</sub> and global warming initiatives.

- Reviewed gas procurement strategy for 1300 MW of combine cycle generation.

Conducted a tactical and strategic alternatives study of the Company's fleet of 158 combustion turbine generation plants.  
Developed a plan for complying with the 1990 Clean Air Act Amendments.  
Assisted in a study of the 1992 Energy Policy Act; prepared a report that illustrated how it would impact company operations.  
Wrote and supported testimony in the area of fossil generation on behalf of the Company in a major rate case.  
Developed protocols for NO<sub>x</sub> emission trading within NESCAUM.

*F.E.R.C.* – Interfaced with Commission and their staff on issues such as Transco structures, restructuring, and ISOs. Prepared a white-paper that addressed a Transmission PBR as a mechanism for incenting utilities.

*Pennsylvania Governor Task Force.* – Provided input to Governor's office, legislature and PUC on restructuring issues in state. Issues included handling of stranded costs, securitization, the development of competition, and the education of consumers.

*Entergy Corporation.* – Project Manager for a review of affiliated transactions between Entergy Corporation, Entergy Services, Inc., and a myriad of regulated and non-regulated subsidiaries. This engagement, performed for five regulatory agencies, is in response to the 1991 Settlement Agreement with the SEC, at which time the holding company was formed. The results of this audit included re-allocation of almost \$5 million and a reconfiguration of reporting requirements.

*Sempra Energy (SDG&E and SoCalGas).* – Project Director for affiliated audit for 1998 and 1999 calendar years to verify compliance with California PUC restructuring requirements. Assignment included assessment of Company Plan and audit of affiliate transactions. Acted as the lead consultant on areas that addressed Non-discrimination Standards, Disclosure and Information Standards, and Competitive Services. Recommendations from these reports addressed means of improving compliance.

*Clean Air Action Corporation.* – Assisted in development of strategy regarding purchase and sale of emission credits throughout the Ozone Transport Region.

*Honeywell/Allied Signal.* – Provided strategic assistance and research in development of commercial fuel cell. Conducted market research and facilitated meetings with utilities interested in commercial development.

*Colonial Chemical Company.* – Assisted Company in identifying candidates for Selective Non-Catalytic Reduction systems to reduce nitrous oxide emissions from power plants.

*Commonwealth Edison Company.* – Retained by the Illinois Commerce Commission to investigate outages suffered in downtown Chicago during the summer of 1999. The assessment provided a comprehensive analysis of eight separate outages, with details of causes and recommendations for improvement. Acted as Project Director and testified before the Commission.

***Choptank Electric Cooperative.*** – Lead Consultant on a management and operations review for this REA in the State of Maryland. Reviewed all aspects of operations including executive management, organization, construction management, electric operations, system planning, materials handling, purchasing, and customer service. One major element included an investigation of failures of underground cables throughout the system. Performed an extensive failure analysis and presented findings to the Board of Directors and PSC.

***Public Service Electric & Gas Company.*** – Retained by the New Jersey Board of Public Utilities to assess compliance with all Affiliate Compliance and Code of Conduct Rules enacted as a result of restructuring.

***Louisville Gas & Electric.***– Project Manager for a comprehensive management and operations review for the Kentucky Public Service Commission. A key element of this audit was the analysis of the Energy Services Company of LG&E Energy, a holding company which was the organizational entity responsible for all regulated generation and non-regulated generation, power marketing, and natural gas transmission activities. This included a special review of affiliated transactions. Acted as Lead Consultant in the areas of power production, fuel procurement, Affiliated Review, Clean Air Act compliance, Energy Policy Act response, and T&D engineering and construction. Assisted in review of strategic planning and power marketing activities. In conjunction with this audit, Mr. Drabinski met with the Commissioners a number of times to discuss issues of industry restructuring and the role the Commission should play.

***Kentucky Utilities Company.*** – Project Manager for a comprehensive management and operations review for the Kentucky Public Service Commission. Acted as Lead Consultant in the areas of power production, fuel procurement, transmission operations, and engineering and construction. Provided numerous recommendations to improve competitiveness of this already low-cost utility. Met with the leadership of the State House of Representatives and Senate to discuss utility competition and industry restructuring.

***Louisville Gas and Electric/Kentucky Utilities Merger.*** – Assisted with broad range of issues including regulatory strategy, synergy quantification, testimony development, witness preparation, interrogatory development and responses. System reliability and monitoring was a key element of this complex project.

***BellSouth Telecommunications, Inc.*** – Project Manager on a review of BellSouth performance under an alternative regulation plan for the state of Kentucky. This is the first of nine states in which the Price Regulation Plan is up for renewal and, as such, is of great interest to the Company and regulators.

***New England Telephone.*** – Provided assistance with quality control and final reviews of work product while an officer with the lead firm. This project reviewed affiliate transactions between parent and its subsidiaries.

***GTE of California and Contel of California (now Verizon).*** – Audited collection procedures and practices for various surcharge activities. Provided a CPA Opinion Letter (through a subcontractor.)

***US West.*** – Provided assistance with quality control and final reviews of work product while an officer with the lead firm. This project reviewed affiliate transactions between parent and its subsidiaries. Assisted in development of model for cost allocation analysis.

***San Diego Gas & Electric.*** – Project Manager on an assignment for the California PUC and SDG&E to review the implementation of Performance Based Ratemaking. This assignment included an assessment of financial, operational, and culture changes that were impacted by the two-year experimental program. The assessment included the development of performance measures for transmission and distribution systems.

***Duquesne Light Company.*** – Project Manager for a comprehensive management and operations review for the Pennsylvania Public Utility Commission. Mr. Drabinski was also the Lead Consultant in the review of transmission & distribution budgeting, executive management, strategic planning, affiliated relations, and financial management.

***SDG&E, PG&E, SCE, and SCG.*** – Project Manager on an audit of DSM administrative costs. Conducted for the CPUC CACD, this assignment took place during the period where working groups were assessing issues such as access to utility information and the future of DSM. Vantage provided feedback to a number of working groups on the needs of energy service companies.

***East Kentucky Power Cooperative.*** – Performed a comprehensive review of all fuel procurement and fuel utilization activities for the Board of Directors. Visited all power plants, coal tipples, and a sampling of mines. Recommendations addressed a broad range of strategic and operational issues.

***Dayton Power & Light.*** – Performed a comprehensive review of all fuel procurement and fuel utilization activities for the PUCO. Visited power plants, coal lab, and other fuel and operations related departments. Recommendations addressed a broad range of strategic and operational issues.

***Pennsylvania Power & Light.*** – Lead Consultant for a comprehensive management and operations review for the Pennsylvania Public Utility Commission. Reviewed all aspects of customer service activities, including CIS and office operations. Also, reviewed system power & engineering, including fuel supply, T&D engineering, environmental, power plant staffing, and plant operations. Reviewed EMF issues and Clean Air Act Amendments compliance planning.

***Centerior Companies (Cleveland Electric Illuminating Company and Toledo Edison).*** – Project Manager on audit of electric fuel procurement practices and procedures for the Public Utilities Commission of Ohio in 1991. Responsibilities included the review of fuel procurement planning, long-term contracts, and spot procurement. Made recommendations regarding coal contracts, interstate wheeling arrangements, and coal transportation costs. Testified twice regarding results of audit report.

***Monongahela Power (Allegheny Power Systems).*** – Performed a comprehensive review of all fuel procurement and fuel utilization activities for the PUCO. Visited power plants, coal

lab, and other fuel and operations related departments. Recommendations addressed a broad range of strategic and operational issues.

*American Electric Power Company.* – Project Manager on audit of electric fuel procurement practices and procedures of two AEP subsidiary companies, Ohio Power Company and Columbus Southern Power Company in 1989 and 1990 for the Public Utilities Commission of Ohio. Responsibilities included the review of affiliated mines (surface and deep mines) and fuel procurement planning, long-term contracts, and spot procurement. Made recommendations on strategic planning, purchasing policies, contract analysis, and marketing programs. Testified on four occasions regarding results of audits.

*Union Light, Heat and Power.* – Lead Consultant on a management and operations review for the Kentucky Public Service Commission. Responsibilities included all aspects of customer service and electric operations including: CIS, customer accounting, transmission & distribution, system planning, engineering, and construction. Also, assisted in the review of the financial reporting relationship of the Company to its parent, Cincinnati Gas & Electric, with an emphasis on allocation of costs.

*West Texas Utilities.* – Project Manager for a comprehensive management and operations review for the Texas Public Service Commission. Acted as a Lead Consultant in the areas of Transmission and Distribution, power production, fuel procurement, and customer services.

*Philadelphia Gas Works.* – Project Manager for a management and operations audit for the Philadelphia Gas Commission. Lead consultant for the review of corporate organization and staffing, customer services, operations, and support functions. Addressed major gas supply planning issues. Managed a series of three follow-up reviews including development of Management Audit Actions Plans, an Audit Compliance Review, and a Review of the 1993 O&M Budget. Testified at numerous Commission hearings on capital budget planning, automatic meter reading, office aggregation, and theft of service.

*Maryland Public Service Commission.* – Consultant for an assignment to review long-term gas purchasing practices of Columbia Gas of Maryland, Baltimore Gas & Electric, and Washington Gas Light. Responsibilities included review of the 1988 plans, recommendations on requirements for future plans, and the training of commission staff personnel relative to conducting similar reviews of future plans.

*Kentucky-American Water Company.* – Project Manager and Lead Consultant for a management and operations review for the Kentucky Public Service Commission. A key element of this audit was the holding company relationship with the many subsidiaries of American Water Works. Investigated the areas of customer service and marketing and engineering/construction.

*El Paso Natural Gas Company.* – Lead Consultant on a productivity improvement project. Performed an in-depth review of all positions in operating divisions and reorganized operating divisions into profit centers. Developed procedures for in-house vs. outside construction decisions, construction scheduling, and cost data collection. Developed a manpower planning model for restructuring responsibilities and staffing levels.

Implemented a workforce management program at gas processing plants, compressor stations, and throughout the gathering system.

*Western Kentucky Gas Company.* – Lead Consultant for a management and operations audit of the customer services function for the Kentucky Public Service Commission. Developed plan for consolidating offices, resulting in significant changes in providing customer service.

*National Gas and Oil Company of Ohio.* – Lead Consultant on audit of fuel procurement practices for the Ohio PUC in 1986. Reviewed purchasing practices, storage activities, sales practices and policies and procedures. Made recommendations on strategic planning, purchasing policies, and marketing programs.

*Pennsylvania Power Company.* – Lead Consultant on a management and operations review for the Pennsylvania Public Utility Commission. Responsibilities included review of customer services with a specific review of collection practices and policies, staffing, T&D, engineering, and system planning. Reviewed organization and staffing for the power production department.

*Philadelphia Suburban Water Company.* – Lead Consultant/Project Manager on a comprehensive management audit for the Pennsylvania Public Utility Commission. Reviewed all aspects of field operations and water production.

*East Kentucky Power Cooperative, Inc.* – Performed as a subcontractor on a review of the bidding process for a series of combustion turbines. Analysis included reviews of individual proposals and the bidding process.

*General Waterworks Company - Pennsylvania Operations.* – Lead Consultant in a management and operations review. Reviewed compensation, benefits and staffing, executive management, organizational structure, and corporate policies and procedures.

*General Waterworks Company - Pine Bluff Arkansas Operations.* – Project Manager on a management and operations review. Reviewed finance and accounting, staffing, system operations, organizational structure, and corporate policies and procedures.

*General Electric Field Engineering group.* – Lead Consultant for the implementation of a Job Management Program that included seminars, teaching concepts on work breakdown structures, budgeting, performance measurement, and critical path scheduling techniques. Overall program was aimed at improving construction management skills of field personnel.

*Ohio Electric Co./Ohio PUC.* – Lead Consultant on a prudence review of the Beaver Valley Power Station. Areas reviewed included CAPCO organization and financing, construction management, project accounting, compatibility of prudence standards, and compliance with Yellow Book standards.

*Philadelphia Electric Company.* – Lead Consultant on a retrospective investigation of the Limerick Nuclear Power Plant. Analyzed the Company's financial condition during the

construction program and reviewed construction management practices on the project. Prepared testimony for prudence hearings on construction management and financial performance.

*Public Service Electric & Gas Co.* – Project Manager for a retrospective investigation of the Hope Creek Nuclear Plant. Prepared cost reconciliation that identified reasons for cost over-runs. Reviewed construction control tools, productivity results, and analyzed productivity programs for effectiveness. Wrote testimony, answered interrogatories, and assisted in cross-examination of witnesses. Made recommendations on cost tracking systems for future construction projects.

*Houston Light & Power.* – Consultant on South Texas Nuclear Project retrospective analysis. Reviewed construction management procedures and developed testimony for rate case.

*Public Service Electric & Gas Co.* – Project Manager for a review of the Engineering & Construction Department budgeting and approval process for capital projects at PSE&G. Developed flowcharts and improved methods for processing capital budgeting requests.

## **OTHER BUSINESS AND PROFESSIONAL EXPERIENCE**

*System Training Director* for Niagara Mohawk Power Corporation. Managed a staff of 11 supervisors and instructors, as well as numerous contractors and part-time training personnel. Developed and implemented a productivity program to improve operating and employee productivity at all fossil power plants. Developed a performance-based progression program for craft personnel and assisted in negotiating contract changes with the International Brotherhood of Electrical Workers. Member of Electric Power Research Institute committee on power plant staffing and training. Chaired Electric Utility Technical Education Council. Developed and taught a seminar on power plant efficiency improvement to operating, management, and regulatory personnel.

*Electrical Maintenance Supervisor* for Niagara Mohawk Power Corporation. Managed two supervisors and 30 electricians performing electrical construction, maintenance, and repair. Developed and implemented a preventive maintenance program for a six-unit/2000 megawatt power plant. Managed roving maintenance crew, providing personnel, equipment, and expertise to nuclear power plants during outages. Responsibilities included all plant, fuel handling, and pollution control electrical equipment, switchyards, 345 kV overhead and 115 kV underground transmission lines, relay systems, telemetering, and telecommunication systems.

*Operation Project Engineer* for Niagara Mohawk Power Corporation. Participated in conceptual system design, construction management, and plant start-up of power plants, transmission lines, switchyards and plant electrical equipment. Represented Utility during acceptance testing, start-up, and turnover of all electrical power systems, auxiliary equipment, and turbine and boiler instrumentation and control systems.

## **TESTIMONY**

Testimony was provided in the following cases:

- Case 99-434 BellSouth of Kentucky. Audit and modification of Price Regulation Plan.
- Commonwealth Edison – Testified before Illinois PSC on outages of 1999.
- PSE&G Restructuring hearing. Lead witness on all aspects of unbundling, restructuring, stranded costs, and deregulation issues.
- Case No. 97-105-EL-EFC Management Performance Audit of Fuel Related Policies and Practices of Dayton Light Company for the PUC of Ohio.
- Case No. 95-106-EL-EFC Management Performance Audit of Fuel Related Policies and Practices of Monongahela Power Company for the PUC of Ohio.
- Case No. 96-106-EL-EFC Management Performance Audit of Fuel Related Policies and Practices of Monongahela Power Company for the PUC of Ohio.
- Case 93-02-041 Financial Audit of the Demand-Side Management Pilot Bidding Program Administrative Services of Pacific Gas & Electric Company, San Diego Gas & Electric Company, Southern California Edison Company, and Southern California Gas Company for the California PUC.
- Case D94-08-023 Mid-Point Evaluation of SDG&E's Base Rates Performance Based Ratemaking Mechanism for the California PUC.
- Case No. 94-219-GA-GCR Management Performance Audit of West Ohio Gas Company for the PUC of Ohio.
- Case No. 91-103-EL-EFC Management Performance Audit of Fuel Related Policies and Practices of Toledo Edison for the PUC of Ohio.
- Case No. 91-104-EL-EFC Management Performance Audit of Fuel Related Policies and Practices of Cleveland Electric Illuminating Company for the PUC of Ohio.
- Case No. 89-100-EL-EFC Management Performance Audit of Fuel Related Policies and Practices of Ohio Power Company for the PUC of Ohio.
- Case No. 89-101-EL-EFC Management Performance Audit of Fuel Related Policies and Practices of Columbus Southern Company for the PUC of Ohio.
- Case No. 90-100-EL-EFC Management Performance Audit of Fuel Related Policies and Practices of Ohio Power Company for the PUC of Ohio.
- Case No. 90-101-EL-EFC Management Performance Audit of Fuel Related Policies and Practices of Columbus Southern Company for the PUC of Ohio.

## **PUBLICATIONS**

Primary contributing author of five textbooks developed for the Electric Power Research Institute (EPRI) and the Center for Occupational Research and Development (CORD).

- Introduction to Instrumentation and Control.
- Electronic and Pneumatic Control Devices.
- Control Systems I.
- Control Systems II.
- Power Plant Control System Applications.



**EDUCATION**

MBA, The Wharton School, University of Pennsylvania, (Finance/Management).  
BSEE, State University of New York at Buffalo, (Systems Engineering/Power Technology).  
Institute of Electrical and Electronic Engineers.  
Project Management Institute.  
American Water Works Association.



## RESUME OF MR. HOWARD J. AXELROD

### AREAS OF SPECIALIZATION

Dr. Howard Axelrod has over 30 years of experience in utility planning, forecasting, and strategic regulatory and market analysis. With proficiencies in power systems planning, regulatory economics, and marketing, he offers a multidisciplinary approach to assessing and solving complex energy issues. Having served on the New York Public Service Commission as special assistant to Chairman Alfred Kahn, and then appointed by Governor Cuomo as Director of the Consumer Protection Board's Utility Intervention program, he has gained considerable insights into the needs of energy consumers and the protections they require, especially as the industry becomes less regulated.

Dr. Axelrod also has extensive knowledge of the regulatory initiatives which foster the restructuring of the electric utility industry in the New England, New York, and PJM regions. He is an active participant in New York's Competitive Opportunities proceeding having served on several committees including the stranded cost computation and recovery, Independent System Operator, and Market Power committees. In New Hampshire, he participated in the state's Retail Pilot Project and helped a major New York utility prepare its market entry in New Hampshire and Massachusetts. As a consultant to the FERC, he supported the development of the Draft Environmental Impact Statement for the Mega-NOPR (FERC Order 888 and 889) for which he analyzed emerging transmission technologies that would enhance competition and also developed the industry structure scenarios used to assess the environmental impact of a competitive energy market.

He is a senior strategic advisor to a number of major electric, gas and telecommunications utilities as they address a range of competitive issues. Dr. Axelrod has participated in a number of Commission and Board sponsored management audits with a focus on executive management, enterprise risk analysis, strategic planning, and marketing. He has also participated in and managed over 200 electric, gas and telecommunications rate applications including the review of cost of service (including affiliate transactions), rate design, and rate of return.

### SELECTED CONSULTING EXPERIENCE

For the **New York Power Authority's Board of Trustees**, Dr. Axelrod was lead consultant performing an independent management review of NYPA's Risk Management function.

For the *New York Independent System Operator's Board of Directors*, Dr. Axelrod performed an enterprise risk management review which addressed all aspects of the ISO operations as well as organizational and operational requirements for its transition to a regional transmission organization.

For *Santee Cooper Power*, Dr. Axelrod prepared an economic analysis of decommissioning expenses associated with the W. C. Summer nuclear plant. This study supported Santee Cooper's compliance with FASB 143 requirements for long lived assets by deriving the livelihoods associated with each decommissioning scenario.

### **Resume of Dr. Howard Axelrod**

For *Edison Electric Institute*, Dr. Axelrod supported the assessment of issues relating to Standard Market Design with an emphasis on resource adequacy and transmission planning. He also facilitated the development of EEI's principles associated with regional transmission organizations.

For *Omaha Public Power District*, Dr. Axelrod led a two-day training seminar on "Measuring Uncertainty and Mitigating Risk." Such topics included computation of Value at Risk (VAR), portfolio analysis and Monte Carlo modeling.

For a major *Northeast utility*, Dr. Axelrod has supported the development of its restructuring plan as well as the assessment of all the major restructuring plans in New York, Pennsylvania, Massachusetts and New Jersey.

For a *DTE (Detroit Edison)*, Dr. Axelrod trained its strategic planning staff to evaluate risk and uncertainty associated with the company's portfolio of regulated and competitive business ventures.

For a *New England based electric cooperative*, Dr. Axelrod supported the development of a financial risk model to be used to assess the uncertainty of the New England energy markets.

For *Ameritech*, Dr. Axelrod served as a senior marketing advisor to the President of its Information Industry Service and Business Development division. Dr. Axelrod was also retained to facilitate the sale of Ameritech's Energy Connections business unit.

For *Unitil*, Dr. Axelrod is supporting the development of B2B e-commerce based market and business opportunities.

For several *regulatory clients*, Dr. Axelrod provided technical and analytical support relating to the development of the Regional Transmission Organization, Desert Star, the Translink ITC and transmission expansion planning at the New England ISO.

*Louisville Gas & Electric Company.* - Dr. Axelrod served as Lead Consultant in reviewing all aspects of LG&E's executive management and corporate planning functions, in addition to supporting the review of all gas and electric marketing activities. This review, conducted at the request of the Kentucky Public Service Commission, was an extremely cooperative effort, which resulted in the identification of several strategic opportunities as well as a number of areas for improving performance.

*Kentucky Utilities Company.* - Dr. Axelrod served as Lead Consultant in reviewing all aspects of KU's executive management and corporate planning functions for this very low cost electric utility. Several recommendations were made for KU to strengthen its marketing activities to take advantage of a changing market.

### **Resume of Dr. Howard Axelrod**

***New York State Dormitory Authority.*** - Dr. Axelrod was retained as a senior energy consultant to develop an electric and gas purchasing program for New York's public and private hospitals, university centers, and health care facilities.

***The Energy Authority (TEA).*** - Jointly owned by Jacksonville Electric Authority, the Municipal Electric Authority of Georgia and Santee-Cooper, Dr. Axelrod is serving as senior energy economist and is performing an independent assessment of the Authority's settlement and operating procedures. TEA is a FERC approved electric marketer and operates the largest "customer-owned" electric trading floor in the United States.

***Energy Connections (Subsidiary of Commonwealth Energy).*** - Dr. Axelrod served as a senior marketing advisor and has developed joint electric and telecommunications strategies for electric utilities preparing for retail competition. *Energy Connections*, has created a two way communications platform which provides electric utilities with the ability to offer retail customers both value added services.

***Omaha Public Power District.*** - Dr. Axelrod served as a co-chair of two internal research teams whose responsibility was to investigate and propose business strategies relating to the formation of new utility businesses and an energy service company (ESCO) in preparation for that state's introduction of retail competition. Such new business opportunities included gas acquisitions and expanded telecommunications applications for existing dark fiber capacity. For this assignment, Dr. Axelrod also developed a one-day training program on "Value Marketing and Pricing."

***New York.*** - Dr. Axelrod, representing a major electric and gas utility, was an active participant in the NY PSC's Competitive Opportunities for Electric Service proceedings. As part of this assignment, Dr. Axelrod has performed an in-depth review of each of the electric utility restructuring plans submitted to the PSC, which included a description of their proposed transition strategy.

***New Hampshire.*** - Dr. Axelrod represented a major investor-owned electric utility in the Nation's first statewide retail electric pilot project. He facilitated the formation of a team of active parties who have become one of the leading participants in this pilot project. For this assignment, Dr. Axelrod reviewed all of the procedures established by the Commission including each utility's marketing and customer education program.

***F.E.R.C.*** - Dr. Axelrod was retained as a subcontractor to support the development of the draft environmental impact statement for the NOPR associated with FERC Order 888. His primary role was to develop industry-restructuring scenarios for a competitive electric energy market.

***New York State Electric and Gas, Inc.*** - Dr. Axelrod supported the development of the company's first Gas Integrated Resource Plan for filing with the New York State Public Service Commission in Spring of 1993.

### **Resume of Dr. Howard Axelrod**

***Kansas Power and Light Gas Service.*** - Dr. Axelrod led in the development of the company's first strategic gas marketing plan. This study included the reorganization of the marketing department; the development of an integrated planning team; and the facilitation of strategic planning sessions addressing marketing tactics, competitive market strengths and weaknesses, and technology assessments.

***Omaha Public Power District.*** - Dr. Axelrod co-chaired two internal study groups whose mission was to identify new business opportunities and value-added services that OPPD could provide in response to retail competition.

***Georgia Power.*** - Dr. Axelrod has performed several strategic assignments related to its integrated resource plan and planning process. Such assignments included:

An organization review of the company's planning process to develop an integrated resource planning approach;

An independent review of GPC's forecasting, conservation, and demand management and marketing programs in relationship to the need for power assessment of Plant Vogtle;

The preparation of an economic impact assessment of Plant Vogtle on the State of Georgia;

The support and development of GPC's first integrated resource plan.

***Pennsylvania PUC, audit of Penelec and Met Edison.*** - Supported the Executive Management and Corporate planning assessment and was Task Leader for focused analysis of power supply planning, bulk power marketing, energy forecasting, and load management.

***Pennsylvania PUC, audit of Pennsylvania Power and Light.*** - Supported the Executive Management and Corporate Planning assessment including integrated planning, and bulk power marketing strategies. He also led a supported focused analysis of decommissioning plans, power pool relations, and transmission inter connects.

***Wallingford Utilities.*** - Howard Axelrod managed the audit of this municipal's electric and water utilities.

***Illinois Commerce Commission.*** - Dr. Axelrod provided executive oversight of RMI's investigation of Commonwealth Edison's distribution reliability.

***New York PSC.*** - Dr. Axelrod provided executive oversight of RMI's investigation of Niagara Mohawk's transmission and distribution system reliability.

### **Resume of Dr. Howard Axelrod**

*New York PS.* - Dr. Axelrod was a member of the PSC staff team responsible for the first comprehensive Management audits of Consolidated Edison and Orange and Rockland Utilities.

*Georgia Power.* - Dr. Axelrod performed an internal investigation of the company's "need for power" associating with the Vogtle Nuclear Plants. Power Supply planning, load forecasting, and conservation was evaluated.

*Northeast Utilities.* - Dr. Axelrod performed an internal investigation of the company's "need for power" associated with the Millstone III nuclear plant. Power Supply planning, load forecasting, and conservation were evaluated.

*Boston Edison.* - Dr. Axelrod performed an independent assessment of the company's integrated resource plan relating to the restart of the Pilgrim Nuclear Plant.

Dr. Axelrod has had numerous assignments in which he supported or led the development of a company's integrated resource plan and/or its demand-side management programs. The following is a list of utility clients.

- Eastern Utilities Associates - Load Forecasting.
- Long Island Lighting Company - DSM Planning.
- Orange and Rockland Utilities - DSM Rate Recovery.
- KPL - Gas Services - Gas Marketing and DSM.
- Kansas Power & Light - DSM Assessment.
- New York State Electric & Gas - Gas IRP.
- Georgia Power - Electric, IRP, and Load Forecasting.
- Iowa Power - Electric IRP.
- Oglethorpe Power - Electric IRP and load forecasting.

### **EXECUTIVE MANAGEMENT**

Dr. Axelrod has supported and facilitated the development of strategic plans for several utilities that include the following.

- Commonwealth Edison.
- Brooklyn Union Gas.
- Central Nebraska Public Power and Investigation District
- Municipal Electric Utility of Georgia.
- Georgia Power.
- Oglethorpe Power.
- KPL - Gas Services.

### **UTILITY RATE-MAKING AND REGULATORY POLICY ANALYSIS**

Dr. Axelrod has extensive rate-making experience having served as a staff member of the New York Public Service Commission and as Director of Utility Intervention for the New York Consumer Protection Board. He has testified in over 75 proceedings and managed over 200 rate cases. As a management consultant for the last ten years, Dr. Axelrod has supported the development of a range of regulatory strategies for major electric and gas utilities.

### **Resume of Dr. Howard Axelrod**

Dr. Axelrod has provided expert testimony in areas addressing cost of capital, wages and salaries, labor and total factor productivity, energy and sales forecasts, excess capacity, rate phase-ins, economic impact, nuclear "need for power" prudence, affiliate transactions and promotional rate practices. He has also been lead consultant in rate settlement proceedings before state and federal regulators.

His clients have included Georgia Power, Northeast Utilities, Western Resources (KPL), Brooklyn Union Gas, Boston Edison, Eastern Utilities Associates, Midwest Resources (Iowa Power), Oglethorpe Power, Northern Indiana Public service, Old Dominion and New York State Electric and Gas.

### **MARKET ANALYSIS, MARKETING AND COMPETITIVE ASSESSMENT**

Dr. Axelrod has performed a wide range of studies in the areas of market analysis, sales forecasting and marketing. He is an experienced strategic planner and marketing facilitator and process analyst. He has supported a number of major utilities develop comprehensive business and marketing strategies focused for both customer retention and expansion. He has also been retained to review and assess planning, forecasting and marketing processes and recommend changes in response to the transition to a competitive energy market. He has helped utilities develop customized marketing programs for key customers accounts, area and economic development, electric and gas technology assessment, gas main extension strategies and natural gas vehicle programs.

His clients have included Public Service Electric and Gas, Long Island Lighting Company, Brooklyn Union Gas, Orange & Rockland Utilities, Georgia Power, Oglethorpe Power, New York State Electric & Gas, and Western Resources. In addition, as part of comprehensive management audit studies, Dr. Axelrod has evaluated wholesale and retail marketing at Pennsylvania Electric, Metropolitan Edison, Pennsylvania Power & Light, Kentucky Utilities and Louisville Gas & Electric.

### **STRATEGIC PLANNING, MERGER AND ACQUISITION ANALYSIS**

Dr. Axelrod has extensive experience in the areas of strategic planning and merger and acquisition analysis. He has supported a number of electric and gas utilities develop strategic and business plans. On several instances he has facilitated senior management strategic retreats. Dr. Axelrod has also performed independent studies assessing the acquisition of electric and gas utilities. For Commonwealth Edison he was instrumental in the company's successful defense of a City of Chicago takeover bid. He also performed acquisition studies of Long Island Lighting Company's gas division, Finger Lakes Gas Company and Savannah Electric. For a major southeast utility, he performed risk analysis of a number of gas acquisition opportunities.

Dr. Axelrod has completed strategic planning, merger and acquisition analysis assignments on behalf of Commonwealth Edison, Brooklyn Union Gas, The Village of Urbana, NY and other confidential utilities.

## Resume of Dr. Howard Axelrod

### **ORGANIZATIONAL CONSULTING**

Dr. Axelrod has performed a number of organizational studies for electric and gas utilities. His primary specialty is the analysis of planning, forecasting and marketing processes. He has supported a number of utilities re-engineer these functions in the company's effort to transition to a competitive market. The planning areas have included both integrated resource planning and strategic planning. For the marketing function he has supported the development of both retail and wholesale marketing strategies and organizations. Dr. Axelrod has also performed several "best practices" studies for wholesale and retail marketing and has used these findings to recommend organizational and process changes to significantly improve performance. On several occasions he helped management prepare its organization for an integrated planning environment and collaborative proceedings.

Dr. Axelrod has completed organizational consulting assignments on behalf of Georgia Power, Oglethorpe Power, Long Island Lighting Company, KPL-Gas Services, Wallingford Electric Department, and the City of Dover Electric Department. For state regulatory agencies, Dr. Axelrod reviewed the planning and marketing organizations of the following utilities: Pennsylvania Electric, Metropolitan Edison, Pennsylvania Power and Light, Public Service Electric & Gas, Delmarva, Kentucky Utilities and Louisville Gas & Electric.

### **OTHER BUSINESS AND PROFESSIONAL EXPERIENCE**

*Energy Strategies, Inc.* - Founder and President.

*R. J. Rudden and Associates* - Vice President.

*Resource Management International* - Vice President.

*Planmetrics, Inc.* - Vice President - Regulatory Strategy Group.

*New York State Consumer Protection Board* - Director of Utility Intervention.

*New York State Energy Research and Development Authority* - Project Manager.

*New York State Public Service Commission* - Senior Research Analyst.

*General Electric Company* - Application Engineer.

### **PROFESSIONAL MEMBERSHIPS**

Institute of Electrical and Electronics Engineers, Senior Member.

### **REGISTRATIONS**

Registered Professional Engineer, New York.

### **SELECTED PUBLICATIONS**

"POLR in Pennsylvania", presentation to the Pennsylvania Energy Associations' Annual Conference, Sept, 2000.

"Brand Management: A Primer on Branding", an EPRI White Paper, December, 1999.

"An Assessment of the Market of the Market Potential for Value Added Services", unpublished, June 1997.



### Resume of Dr. Howard Axelrod

- "Strategies to Develop a National Customer Base", presented at the 1997 Annual Executive Marketing Conference sponsored by the Institute of Gas Technologies.
- "Value-Based Pricing: Being Competitive and Profitable", presented at the DA/DSM Annual Conference, January 28-29, 1997.
- "The Role of Peak Shaving in an Open Access Industry," presented at the Institute of Gas Technology conference on Peakshaving: Issues, Answers & Strategies, June 24-26, 1996.
- "Financial Implications of a Changing Natural Gas Marketplace," presented at the Institute of Gas Technology conference on Energy Marketing, December, 1995.
- "Where Will New Energy Markets Emerge and How Quickly?", presented at the Institute of Gas Technology conference on Natural Gas Marketing, September, 1994.
- "The DSM-Marketing Linkage," paper presented at the GRI and A.G.A. Workshop on Gas Load Research and Demand Analysis, May, 1994.
- "Managing Your Gas IRP," paper presented at the Northeast Gas Market Annual Meeting, June 1993.
- "Risk and Uncertainty in Utility Planning," with James Letzelter, Resource, Volume 4, Number 2, Summer 1992.
- "Was Your Winter Cold Enough?" Resource, Volume 4, Number 1, Spring 1992.
- "Rocky Mountain Pumped Storage Validation Report," prepared for Oglethorpe Power, June 1991.
- "Putting Your Forecasters Back to Work," Resource, Volume 1, Number 1, Spring 1991.
- "An Independent Assessment of the Costs, Benefits and Risks Associated with a Municipal Takeover of Commonwealth Edison's Chicago Divisions," prepared for Commonwealth Edison Company, 1988.
- "The Economic Impact of Electric Rate Increase Options in Georgia," prepared for Georgia Power, November 1986.
- "Predicting the Next Regulatory Crisis: An Issues Management Approach," appeared as a chapter in a book entitled *The Future of Electrical Energy: A Regional Perspective of an Industry in Transition*, 1986.
- "Analysis of Brooklyn Union Gas Company's Proposal to Purchase the Long Island Lighting Company's Gas Operation," prepared for Brooklyn Union Gas Company, July 1985.
- "Economic Analysis of Incremental Electric Generation Sizing and Timing," Doctoral Thesis, Rensselaer Polytechnic Institute, May, 1981.
- "Factors Influencing Industrial Coal Conversion in New York State," with Dr. Fred Strinisa, paper presented at the Governor's Conference on Expanding the Use of Coal in New York State, May, 1981.
- "Utilization of Solid Waste in New York: A State Governor's Positive Action Program," paper presented at the First International conference on Conversion or Refuse to Energy, Montreux, Switzerland, November, 1975.
- "Measuring Electric Utility Productivity," appeared as a chapter in a book entitled Public Utility, August 1975.

### **Resume of Dr. Howard Axelrod**

“Prospects of New and Evolving Technologies,” with P. Mathusa, D. Stricos, H. Guttman and B. Dwyer, New York Public Service Commission, April 1975.

“Urban Applications of Fuel Cells,” with Parker Mathusa, Electric Light and Power, April, 1972.

### **EDUCATION**

Ph.D. - Managerial Economics , Rensselaer Polytechnic Institute, Troy, New York.

MBA - Organizational Theory and Marketing, State University of New York, Albany.

M.S.E.E. - Power Systems, Northeastern University, Boston, Massachusetts.

B.S.E.E. - Power Systems, Northeastern University, Boston, Massachusetts.

### **HONORS AND FELLOWSHIPS**

General Electric Research Grant.

Northeast University Graduate Research Scholarship.

Rensselaer Polytechnic Institute Teaching Fellowship and Research Scholarships.

New York State Energy Research and Development Grant.

United States Department of Energy PURPA Advisory Panel.

Listed in Who's Who in the East.



## RESUME OF MR. MARK D. FOWLER

### AREAS OF SPECIALIZATION

Mr. Fowler has significant experience in the utility industry as a management consultant and employee. His functional expertise includes corporate level expertise in acquisitions and divestitures, financial structuring and operational reviews of subsidiary/parents relations. He has performed four affiliate transaction rules audits in California including two for SEMPRA. His expertise in field operations specialization includes operations-improvement, call center operations, and work-management programs with emphasis on crews and supporting organizations.

### SELECTED CONSULTING EXPERIENCE

*Pacific Gas & Electric Co.* – Senior Consultant for affiliated audit for 2001 and 2002 calendar years to verify compliance with California PUC restructuring requirements. Assignment included assessment of company plan and audit of affiliate transactions. Acted as the Lead Consultant on areas that addressed Nondiscrimination Standards, Disclosure and Information Standards, and Competitive Services. Recommendations from these reports addressed means of improving compliance.

*SEMPRA.* – Senior Consultant for affiliated audit for 1998 and 1999 calendar years to verify compliance with California PUC restructuring requirements. Assignment included assessment of company plan and audit of affiliate transactions. Acted as the Lead Consultant on areas that addressed Nondiscrimination Standards, Disclosure and Information Standards, and Competitive Services. Recommendations from these reports addressed means of improving compliance.

*Seattle City Light.* - Senior Consultant on a review of Seattle City Light. Focus areas included debt management, financial modeling and financial projections. The review uncovered significant risk associated with the debt strategy being used and the cash projections.

*Indianapolis Power and Light.* – Senior Consultant on a review of the quarterly reporting of IPLCO and on the installation of a new outage management system. The impetus for the review was significant problems associated with outages following a series of storms in 2001. The review is ongoing for three years.

*New Jersey Board of Public Utilities.* – Assisted in the evaluation of Public Service Electric & Gas's stranded cost quantification as part of the utility's electric deregulation proposal. This included a reconciliation of FERC and regulatory balance sheets, analysis of proposed changes of T&D depreciation rates, an assessment of proposed capital additions, reconciliation of cost-of-service inputs, analysis of depreciation and tax changes needed for stranded cost calculation, and assessment of tax implications of tax issues of securitization.

*Public Service Electric & Gas Company.* – Retained by the New Jersey Board of Public Utilities to assess compliance with all Affiliate Compliance and Code of Conduct Rules enacted as a result of restructuring.

***Federal Energy Regulatory Commission.*** – Senior Consultant for an operational audit of the California Independent System Operator. The audit was performed for FERC. Assigned issues of primary focus were market design, the relationships among the parties and governance of the ISO.

***Kentucky Power (a wholly-owned subsidiary of American Electric Power Corporation).*** – Consultant on a comprehensive management and operations review, responsible for the review of the transmission, distribution, and customer services functions for the Kentucky Public Service Commission. Key elements of the review included cost efficiencies, service company cost allocations, service quality, planning integration, and the composition and size of maintenance and construction workforces.

***Potomac Electric Power Company.***– Consultant on a management audit of the fuel procurement activities for the Maryland Public Service Commission. Areas of review included fuel inventory management, gas and oil procurement, transportation, and storage.

***Bell South- Kentucky*** - Consultant in a comprehensive study of the company performance under an alternative price regulation plan. The second aspect of the study made recommendations on the design of a price regulation plan on a going forward basis.

***Commonwealth Edison.*** – Lead Consultant on assessment of eight major outages suffered during the summer of 1999. Duties included inspections of manholes and cable vaults where failure occurred. Development of assessment on reasons, including recommendations for repair.

***Potomac Edison.*** - Consultant for a comprehensive management and operations audit of the manpower planning, productivity, and staffing functions for the Maryland Public Service Commission. The review focused on all areas of Potomac Edison, including contractors, with special emphasis on customer service and field operations.

***Edmonton Power.*** - Lead Consultant in a review of the maintenance management planning and implementation process. The review included maintenance at fossil fuel plants and in T&D operations.

***Telecommunications Act of 1996.*** - Acted as technical advisor to states on cases surrounding The Act including Mississippi, Idaho, Virginia and New Jersey. Companies included AT&T, Sprint, MCI, USWEST, BellSouth, Bell Atlantic and Cox Cable. Included expert witness testimony.

***Bell Atlantic-Pennsylvania and Bell Atlantic DC.*** - Lead Consultant in the comprehensive management audit for the Pennsylvania Public Utility Commission and the Public Service Commission of the District of Columbia. Responsible for the review of support services, which included fleet, aircraft, materials management, purchasing, real estate, administrative services, and support services provided by affiliates. Co-lead on the related review of decision-making process used to decide whether to make or buy services, and in particular, the outsourcing and contraction of services related to support function and some OSP operations.

*GTE of Kentucky.* – Lead Consultant responsible for operating reviews of customer-contact functions and support services. Also responsible for review of charges from affiliate organizations.

*United Telephone Company of Pennsylvania.* - Consultant on a management audit for the Pennsylvania Public Utility Commission specializing in the area of customer service. Audit included a focused review of affiliate relations, collection and bad-debt processes, procedures, and regulatory compliance.

*GTE North.* - Lead Consultant in the areas of workforce management and customer service for the Illinois Commerce Commission. Functional areas audited included central-office operation, outside-plant construction and maintenance, network engineering, and business office and service centers.

*United Telephone Company of Texas.* - Consultant on a comprehensive management audit for the Texas Public Utility Commission in the areas of network planning and operations and customer services. Functional areas audited included central office operations, outside-plant construction and maintenance, network engineering, business offices, and service centers.

*Tennessee local exchange companies (Telephone Electronics Corporation).* - Assistant Project Manager and Lead Consultant for the review of productivity systems in a comprehensive management and operations audit for the Tennessee Public Utility Commission. Review covered all functional areas, with an emphasis on outside plant construction, installation and maintenance, and customer-relations work groups.

*New York Telephone.* - Task Leader in a retrospective audit for the New York Public Service Commission of the affiliate transactions of NYT. Reviewed areas of the Material Enterprises Company, including purchasing, inventory management, staffing levels, product-costing methods, contract terms and conditions, and awards made through competitive bids and sole-source contracts. In the review of NYT's relationship with NYNEX's Business Information Systems Company, examined sales agency agreements for customer-premise equipment and network services as well as personal computer sales transactions between BISC and other NYNEX affiliates.

*Illinois Bell Telephone Company.* - Technical Advisor to the staff of the Illinois Commerce Commission in a reconnaissance audit. Technical advice was provided in the area of customer service, which included centralized customer-contact functions, such as operator centers, residential and commercial business offices, and credit and collection centers.

*BellSouth.*- Lead Consultant in a series of studies designed to define the market for technical telecommunications training in the U.S. and Canada.

*Bellcore.* - Consultant in a study performed to forecast the management information requirements needed for service costing in the BellSouth operating companies.

*Tennessee Public Service Commission.* - Lead Consultant on a collaborative engagement designed to develop a telecommunications technology deployment strategy. On this

assignment, work areas included network evaluation and development of a ten-year telecommunications plan.

**CONTEL Service Corporation.** - Consultant on a series of system implementation studies including installing new financial, budgeting, and performance-measurement systems. The studies involved all functional areas of local-exchange operations, as well as support groups from corporate and regional organizations.

**Belize Electric Limited.** - Lead Consultant in an ongoing 18-month reengineering and organizational review. The review addresses organizational realignment and process improvements in new service installation, materials management, distribution, and management information systems.

**Southern California Gas.** - Consultant on two management reviews performed for the California PUC. Areas of review included affiliate transactions and relationships, gas transmission and distribution, engineering, and construction. The second of these reviews focused exclusively on affiliate transactions.

**Southern Connecticut Gas.** - Lead Consultant in a review for the Connecticut Department of Public Utility Control. Responsible for review of the non-regulated charges to the operating company and for the review of the support-services and operations functions including work planning, materials, purchasing, MIS, and facilities.

**Connecticut Natural Gas Company.** - Lead Consultant for the review of support services for a comprehensive management review for the Connecticut Department of Public Utility Control. Review included charges from the parent company to subsidiary operations.

**Yankee Gas Services Company.** - Consultant in a management review for the Connecticut Department of Public Utility Control. Areas included construction, maintenance and support services. Responsible for follow-up activities in several support-services functions.

**City of Columbus, Georgia.** - Performed an operations review for the city's water and wastewater divisions. Focus was primarily on the practices and processes in the construction workforce and in wastewater operations. Emphasis was divided between process improvements and human-relations issues.

**City of Corpus Christi.** - Performed a management audit operations review of all areas of service. Responsibilities included examining processes in construction, fire, police, and support operations. Review was aimed at identifying process improvements in operations.

**City of Colorado Springs.** - Currently working on a benchmarking project that is examining work-process and human-relations issues involved in a multi-service municipal utility making the transition to an automated meter reading.

**Central Hudson Gas & Electric Corporation.** - Consultant on management audit for the New York Public Service Commission. Areas of review included corporate budgeting and the management of contractors.

*Gas Company of New Mexico.* - Consultant in an organization and work management study. The study produced recommendations for information systems, organization structure, staffing mix and the planning, scheduling, and control of work management. Functional areas reviewed included customer services, meter repair and installation, construction, and engineering.

*Sandia National Laboratories.* - Consultant in a work management study. The study produced recommendations covering contract versus in-house work force decision-making, contract management, operations improvements, management processes, and organization structure.

## **OTHER BUSINESS AND PROFESSIONAL EXPERIENCE**

*US Project Manager* for an international utility software developer on an installation of call center forecasting and work management software for a regional bell operating company.

*Financial Analyst* for an electric utility with duties including cash management, loan coordination, accounting coordination of proceeds and floatation of bond issues.

*Acting General Manager* for a steam-heating operation. Duties include employee hiring and training, implementation of manual and computerized systems and procedures, movement of all accounting functions to the parent company, and development of a long-range business plan.

## **EDUCATION**

MBA, The University of Tulsa.

BS, The University of Tulsa.

## RESUME OF MR. CHUCK BUECHEL

### AREAS OF SPECIALIZATION

Mr. Buechel has worked on numerous consulting assignments for electric, gas, water, and telephone utilities. The primary focus of many of these assignments has been regulatory matters, however, he has consulted on other matters, including corporate and strategic planning, incentive regulation, least-cost planning, workforce management, and competitive bidding.

Prior to consulting, Mr. Buechel spent over nine years on the Staff of the Kentucky Public Service Commission. During his tenure at the Commission, he was public utility economist, Director of Research Division, and Deputy Executive Director. His assignments at the Commission included: the preparation of an integrated resource planning regulation; coordinating a statewide load management committee to investigate time-of-day rates and other load management issues; directing staff in rate cases and special investigations; writing orders as directed by the Commission; establishing a management audit program; and testifying in selected cases.

### SELECTED CONSULTING EXPERIENCE

*Pacific Gas & Electric Co.* – Senior Consultant for affiliated audit for 2001 and 2002 calendar years to verify compliance with California PUC restructuring requirements. Assignment included assessment of company plan and audit of affiliate transactions. Acted as the Lead Consultant on areas that addresses Nondiscrimination Standards, Disclosure and Information Standards, and Competitive Services. Recommendations from these reports addressed means of improving compliance.

*Public Service Electric & Gas Company.* – Retained by the New Jersey Board of Public Utilities to assess compliance with all Affiliate Compliance and Code of Conduct Rules enacted as a result of restructuring.

*Seattle City Light.* – Retained by the City Council to perform an audit of the municipally-owned Seattle City Light electric utility. Assigned issue was governance of the municipal utility. The audit yielded recommendations for training the council members to better understand the issues and to add additional resources for oversight of the utility.

*Federal Energy Regulatory Commission.* – Senior Consultant for an operational audit of the California Independent System Operator. The audit was performed for FERC. Assigned issues of primary focus were market design, the relationships among the parties and governance of the ISO.

*Arizona Corporation Commission.* – Senior Consultant to provide advice and assistance to the Commission regarding the on-going implementation of its industry restructuring initiative.

*Louisville Electric & Gas and Kentucky Utilities.* – Actively participated in the development of a comprehensive performance-based regulation mechanism and provided



### **Resume of Mr. Chuck Buechel**

support for development of tariff, preparation of testimony, and witness preparation and worked with attorneys to prepare briefs.

*Public Service Electric & Gas.* – Senior Consultant in the evaluation of cost of service studies and unbundling plan for the Restructuring Plan submitted to the New Jersey Board of Public Utilities.

*Entergy.* - Consultant in this financial audit of affiliated transactions between Entergy Corporation, Entergy Services, Inc., and subsidiaries responsible for the review of affiliated transactions, allocation, accounting procedures and control, improper disclosure, and insulation and segregation of regulated and non-regulated affiliates.

*California Public Utilities Commission.* - Regulatory Lead Consultant for an assignment to assist with the evaluation of a two-year experiment to implement performance-based ratemaking for San Diego Electric and Gas Company's gas procurement and generation and dispatch functions.

*San Diego Gas & Electric Company.* - Consultant responsible for this mid-term evaluation of the Company's Base Rates Performance-Based Ratemaking mechanism which included analysis and assessment in the areas of price and corporate performance.

*Big Rivers Electric Corporation.* – Provided support and assisted with the preparation of the Company's regulatory filings before the Kentucky PSC for approval to implement a proposed lease of its generating assets to a subsidiary of LG&E Energy.

*Delta Natural Gas.* – Assisted with the preparation of an application to increase rates and modify rate design. Testified on rate design changes for larger commercial and industrial customers as well as other specific charges.

*East Kentucky Power Cooperative, Inc.* - Senior Consultant for a project to audit the fuel procurement function at East Kentucky Power Cooperative. The assignment is being performed for the Fuel and Environmental Committee of the Board of Directors.

*Louisville Gas and Electric Company/Kentucky Utilities Company.* - Provided strategic, regulatory and operational advice regarding merger between these two utilities. Assisted with preparation of merger application and provided regulatory strategy regarding synergy savings.

*Kentucky Public Service Commission.* - Engagement Director for a project to prepare a joint response for a consortium of four utilities in Kentucky. The response is to the Kentucky Public Service Commission Administrative Case No. 341, An Investigation into the Feasibility of Implementing Demand-Side Management Cost Recovery and Incentive Mechanisms. The response discusses the advantages and disadvantages of various regulatory incentives with regard to DSM and conservation.

*Louisville Gas and Electric Company.* - Lead Consultant in the preparation of its application to establish a holding company. The application included proposed guidelines

### **Resume of Mr. Chuck Buechel**

to be used in financial dealings between the subsidiary companies, as well as the allocation of costs between the companies.

*New England Telephone Company.* - Consultant for the management audit of its affiliated interests. The audit was performed for the Department of Public Utilities of Massachusetts. Primary responsibilities included providing regulatory advice and consultation to the audit team.

*Kentucky Utilities Company.* - Engagement Director for a project to provide advice and consultation with regard to the preparation of an application for a certificate of convenience and necessity to construct additional peaking capacity. The filing was prepared to comply with a comprehensive regulation on integrated resource plan adopted by the Kentucky Public Service Commission. Areas of responsibility included preparing the responses for the sections of the IRP regulation, which were concerned with demand-side management.

*Columbia Gas of Ohio, Inc.* - Consultant for its management and operations audit. The audit was for the Public Utility Commission of Ohio. Areas of responsibility include requirements forecasting and flexible transportation program.

*Pennsylvania Gas & Water Company.* - Consultant for a comprehensive management audit. The audit is being performed for the Pennsylvania Public Utilities Commission. Areas of responsibility include requirements forecasting, rates and regulatory relations, and financial management and planning.

*West Texas Utilities Company.* - Consultant for a management and operations audit. The audit was performed for the Public Utility Commission of Texas. Areas of responsibility included financial planning and economic analysis, and system planning.

*East Kentucky Power Cooperative, Inc.* - Engagement Director for the performance of an audit of evaluation of competitive bids it received for providing generating capacity to meet its needs. The purpose of the audit was to provide assurance to EKPC's management that each of the proposals is provided fair and consistent treatment. The audit was needed because the company had also provided a bid.

*Big Rivers Electric Corporation.* - Engagement Director for an assignment to implement a comprehensive planning process. The process is centered on an annual planning cycle, which incorporates the corporate and strategic plans with the divisional plans and budgets.

*Kentucky Public Service Commission.* - Witness testifying on behalf of GTE Products Corporation in Kentucky Public Service Commission Case No. 10498, a request by Columbia Gas of Kentucky, Inc. to raise its rates. The testimony supported the continuation of a flexible rate for the transportation of natural gas to industrial customers with alternative fuel capability.

*Henderson County Water District.* - Lead Consultant for a comprehensive operations review. The study was sponsored by the district's Board of Directors. Areas of

### Resume of Mr. Chuck Buechel

responsibilities included operations planning, organization and staffing, system management, and customer service.

*Lexington Fayette Urban County Government.* - Principal Investigator for a report regarding the feasibility of regulating landfill operations at the Kentucky Public Service Commission.

*Kentucky-American Water Company.* - Lead Consultant for a project to review and comment on drafts of testimony and a consultant's report on the need to expand its water treatment capacity. The testimony and report were the subject of a mock hearing.

*Kentucky Public Service Commission.* - Witness testifying on behalf of AT&T Communications in Kentucky Public Service Commission Administrative Case No. 323, an investigation into permitting intraLATA toll competition. The testimony related to the validity of a customer survey submitted by AT&T in the proceeding.

*East Kentucky Power Cooperative, Inc.* - Engagement Director for a project which reviewed its load research program, made conclusions regarding the statistical validity of its previous efforts, and provided recommendations for future studies.

### **OTHER BUSINESS AND PROFESSIONAL EXPERIENCE**

*President, Utility and Economic Consulting, Inc.,* February 1989-Present. The company provides utility, regulatory, management, and economic consulting services. The consulting engagements described above were performed since the formation of UEC.

*Deputy Executive Director* for the Public Service Commission of Kentucky, 1986-January 1989. Primary responsibilities included:

- Managing staff, through their directors, to ensure that cases were processed according to operating procedures and in a timely fashion;
- Working directly with the staff to develop regulatory policy positions for presentation to the Commissioners. One of the key policies developed involved a revised regulatory scheme to promote a more competitive environment for the delivery of natural gas;
- Preparation of a proposed comprehensive planning regulation for the Commission. The regulation, which is applicable to the state's electric utilities, specified filing requirements for the reporting of load forecasts and resource information including demand-side management and supply-side options.

*Director, Division of Research,* for the Public Service Commission of Kentucky, 1983-1986. Primary responsibilities included:

- Managing and providing direction for the economic research staff. The staff provided economic advice to the Commission concerning regulatory issues arising in the electric, telephone, gas, and water industries. This included making case assignments, reviewing the economists' work, preparing budgets, as well as other administrative duties;

## Resume of Mr. Chuck Buechel

Participating in cases before the Commission. This involved working with other staff personnel, reviewing utility filings, preparing data requests and cross-examination of witnesses, advising the Commission, and preparing orders as instructed by the Commission;

Load Management Coordinator. This position required coordinating, leading discussions, and making presentations to two statewide load management committees - a steering and a technical committee. The committees were composed of Commission staff, utility executives, and consumer representatives. The committees met quarterly to discuss and review the implementation of time-of-day rates for large commercial and industrial customers. Various other load management techniques were also reviewed and considered;

Project Coordinator, Case No. 8666 - An Investigation Into Alternative Load Forecasting Methods and Planning Considerations for the Efficient Provision of Electric Generation and Transmission Facilities. In this docket, the Commission hired the services of a consultant to perform the following tasks: review the forecasting methods of the state's electric utilities; provide alternative forecasts; examine the potential benefits of conservation; evaluate alternative construction scenarios assuming the formation of a statewide power pool; and estimate the financial impact of the alternative scenarios. Primary duties were to be the intermediary between the consultants, Commission, the utilities, and other parties; to conduct review sessions on the consultant's work; and to evaluate the draft and final reports produced by the consultant;

Project Officer for comprehensive management audits of Kentucky Utilities Company and South Central Bell Telephone Company. The Commission instituted a management audit program, which involved hiring consultants to review the management practices of all the state's major utility companies. The role of the project officer was to ensure satisfactory and timely performance of the proposed work; to attend selected interviews; and to critically review and evaluate analytical results.

*Public Utility Economist* for the Public Service Commission of Kentucky, 1979-1983. Primary responsibilities included:

Assisting the Commission in implementing procedures and policies to meet the federal mandates of the Public Utility Regulatory Policies Act (PURPA). This involved performing cost-of-service studies, developing alternative rate design proposals, and testifying on the ratemaking standards in Section 111 of PURPA; Developing the Commission's regulations pertaining to cogeneration.

*Assistant Professor*, Department of Economics, for Morehead State University, 1976-1979. Primary teaching responsibilities were investments, introduction to economics, and intermediate macroeconomics. Other teaching responsibilities included managerial economics and computer programming in BASIC. Committee work included membership on the Southern Association Self-Study and the Committee on Student Life.

Resume of Mr. Chuck Buechel**EDUCATION**

B.S. in Economics with Honors, University of Kentucky

M.A. in Economics, University of Kentucky

Ph.D. Candidate, University of Kentucky

## RESUME OF MS. MARTHA J. KING, CPA

### AREAS OF SPECIALIZATION

Ms. Martha King, Senior Consultant with *Vantage Consulting, Inc.* has more than thirteen years of experience in the electric, gas, water, and telephone industries. Ms. King has a broad range of experience in affiliate transactions, financial management, budgeting, accounting, and auditing. She has performed many assignments specifically related to affiliate transactions, four of which were in California. She also has extensive internal control and financial auditing experience for a manufacturing, financial services, and regulated industry client base.

Ms King begun her career as a public accountant for Ernst and Young where she was heavily involved in audit planning for her clients, taking into consideration job risks, internal controls, systems and procedures. She moved to New England Electric System as a financial analyst and worked with fuel adjustment clauses, purchased power estimates and performed general fluctuation analysis of other general ledger accounts. Next at an international manufacturing company, she took on the responsibilities of the US internal auditing department, where she further honed her auditing, planning, and risk analysis skills.

Since joining Vantage, Ms. King has participated as a Lead Consultant or Consultant in the recent assignments listed below in which she investigated one or more of the following areas: internal controls; internal auditing; affiliated relations; financial management; customer accounting and customer service; organization and management; support services; and management information systems.

- Toledo Edison Company.
- Cleveland Electric Illuminating Company.
- St. Vincent Energy Service Ltd.
- Indianapolis Power & Light.
- Pacific Gas & Electric.
- Pacific Bell.
- BellSouth Telecommunications, Inc.
- Commonwealth Telephone Company.
- NYNEX/AT&T.
- Pacific Telesis Group.
- U S WEST, Inc.
- Illinois Bell Telephone.
- Sempra Energy.
- Entergy Corporation.
- Duquesne Light Company.
- Public Service Electric & Gas.
- Louisville Gas and Electric Company.
- Pennsylvania Power & Light Company.
- Central Maine Power Company.

- Pennsylvania Gas and Water Company.

## **SELECTED CONSULTING EXPERIENCE**

*Toledo Edison Company and Cleveland Electric Illuminating Company.* - Lead Consultant for a focused audit of fuel procurement conducted for the Public Utilities Commission of Ohio. Investigated and analyzed fuel procurement policies and procedures for both fossil and nuclear fuels.

*St. Vincent Energy Services Ltd.* - Audited fuel procurement procedures, recalculated Fuel Adjustment Charge assessment, and reviewed policies on fuel contracting.

*Indianapolis Power and Light.* - Currently performing a review of the call center and OMS at IPLCO as part of a review of the companies' performance and reporting.

*Pacific Gas & Electric.* - Lead Consultant for an independent audit of the company's compliance with the Affiliated Rules established by the California Public Utilities Commission.

*New Jersey Board of Public Utilities.* - Assisted in the evaluation of Public Service Electric & Gas's stranded cost quantification as part of the utility's electric deregulation proposal. This included a reconciliation of FERC and regulatory balance sheets, analysis of proposed changes of T&D depreciation rates, an assessment of proposed capital additions, reconciliation of cost-of-service inputs, analysis of depreciation and tax changes needed for stranded cost calculation, and assessment of tax implications of tax issues of securitization.

*Sempra Energy.* - Lead Consultant for an independent audit of the holding company's compliance with the Affiliate Rules established by the California PUC.

*Pacific Bell* - Lead Consultant for an independent audit of two of the company's surcharges, CHCF-B and CTF, to determine compliance with CPUC orders and accuracy of surcharge calculations and remittances.

*Entergy Corporation.* - Lead Consultant for an affiliated relations audit for five commissions composed of four states (Arkansas, Louisiana, Mississippi, and Texas) and the city of New Orleans. Audit focused on transactions between the regulated affiliates and the non-regulated affiliates, but included an overall review of all transactions which were performed using statistical sampling.

*Louisville Gas and Electric Company.* - Consultant for a management and operations audit conducted for the Kentucky Public Service Commission. She investigated the areas of affiliated relationships, cash management, internal audit, customer accounting, and credit and collections.

*Duquesne Light Company.* - Lead Consultant for a stratified management and operations audit for the Pennsylvania Public Utility Commission. Focused on the areas of affiliate relations, internal audit, cash management, treasury, customer accounting, and credit and collections.

*Pennsylvania Power & Light Company.* - Lead Consultant for a management and operations audit conducted for the Pennsylvania Public Utilities Commission. She investigated the areas of financial management (affiliated relationships, corporate finance, financial requirements planning and economic analysis, cash management, management accounting, taxes, budgeting management and control, internal audit, and rates) and management information systems. She also compiled and investigated select data and statistics of PP&L and comparable companies for analysis and reporting. The report was further analyzed by the consulting team and Commission to target areas that warranted additional review and evaluation. She also investigated inventory management utilizing modeling techniques and further refined the data by site visits, extensive physical inventory reviews, and interviews with plant personnel. She also reviewed the costs and efficiencies of in-house construction and maintenance versus external contractors through cross-departmental meetings and extensive analysis using database techniques.

*BellSouth Telecommunications, Inc.* - Lead Consultant on a focused management audit examining the impact of Kentucky's Price Regulation Plan on competition and on BellSouth operations. This ongoing review will produce recommendations on modifications to the Commission service requirements, reporting, and the price Regulation Plan.

*Commonwealth Telephone Company.* - Lead Consultant for a stratified management and operations audit conducted for the Pennsylvania Public Utility Commission. She investigated the areas of treasury, accounting, budget management and control, and internal audit. She also investigated the dividend policies with a focus towards the telephone company's dividends to its parent.

*NYNEX/AT&T.* - Consultant for the audit of the Carrier Access Billing System for NYNEX and AT&T, both of whom rely on this NYNEX process. She was responsible for the root cause analysis, corrective activities, and management reporting portions of the study.

*Pacific Telesis Group.* - Consultant for an audit of the distribution of PacTel Corporation Stock owned by Pacific Telesis Group (Telesis) to Telesis shareholders (the "Spin-Off") for the California Public Utilities Commission. She investigated the financial impact that the Spin-Off would have on the regulated affiliate, Pacific Bell, through analysis of financial statements and economic studies of PacTel Corporation, Pacific Bell, and the consolidated entity Telesis. Ms. King also performed regression analyses on selected financial data to further evaluate potential financial impact of the Spin-Off.

*U S WEST, Inc.* - Consultant for a regulatory impact review and the effect upon ratepayers of U S WEST Communications, for a Three-State Steering Committee (TSSC) of Arizona, Iowa, and Oregon on behalf of the U S WEST Regional Oversight Committee, which is composed of the 14 states served by U S WEST Communications. Investigated areas of finance and accounting, and management structure.

*Illinois Bell Telephone Company (IBT).* - Consultant for a focused management audit of the affiliated transactions of Illinois Bell Telephone Company (IBT) for the Illinois Commerce Commission. Investigated billings to IBT from two key affiliates, Ameritech Services, Inc., and Ameritech Information System, Inc., with respect to total cost assessment, cost



accumulation and assignment, and allocation methodologies. Determined the appropriateness of allocations between affiliates and the allocation methodologies.

*Central Maine Power Company.* - Consultant for a focused review conducted for the Maine Public Utilities Commission, in which she investigated management efficiencies and cost controls focusing on procurement practices and inventory management.

*Pennsylvania Gas and Water Company.* - Lead Consultant for a management and operations review conducted for the Pennsylvania Public Utility Commission. She investigated the areas of accounting and finance (with an emphasis on cash management and dividends paid to its parent company), affiliated relationships and transactions, and management information systems.

### **OTHER BUSINESS AND PROFESSIONAL EXPERIENCE**

Ms. King was an *Internal Audit Manager* for T&N Industries, the North American headquarters for an international manufacturing company, located in Ann Arbor, Michigan. She was instrumental in the establishment of a new audit department. She was responsible for all of the audits and associated communication from the company's headquarters to the international parent and the 30 North American subsidiaries. She was also responsible for all audit reports and their presentation to the Audit Committee. In addition, she coordinated and organized the North American Computer Disaster Recovery Program for North American subsidiaries and was responsible for the department budgets. She also worked with accounting to produce quarterly and annual financial statements, including the statement of cash flows.

Ms. King served as a *Financial Analyst* for New England Electric System, a large public utility holding company with 10 subsidiaries, including one wholesale and three retail companies. In this capacity, she supervised and coordinated the quarterly and annual public audits, analyzed over and under base rate collection by company, computed and tracked the associated interest, analyzed monthly general ledgers including performance to plan, identified opportunities and exposures, and implemented corrective actions. She was responsible for the preparation and analysis of the quarterly consolidated and subsidiary financial statement variance analysis for the respective Board of Directors' meetings. She was actively involved in the preparation of the financial statements and responsible for restating the Annual Report and the Supplemental Annual Report (10-year financial history) for FAS 95, Statement of Cash Flows.

In addition, Ms. King was an *Audit Senior* for Ernst & Young, where she managed and coordinated numerous audit engagements, including internal control reviews. She oversaw the engagement from initial contact with clients to presentation of financial statements and discussion of internal controls current status and potential improvements to clients and their boards of directors.

**EDUCATION**

B.B.A., University of Michigan

C.P.A., State of Michigan

P.A., State of Michigan

## RESUME OF MR. RICHARD A. MAZZINI

Richard Mazzini is an independent consultant with more than thirty five years of experience in the electric industry. He has served as lead consultant on numerous consulting engagements in the United States, Canada, Europe and the Caribbean. His major consulting assignments have focused on the areas of strategic business planning, power marketing, risk management, restructuring and competitive repositioning for utilities.

### AREAS OF EXPERTISE

Strategic business planning.  
 Organization analysis and competitive restructuring.  
 Corporate governance.  
 Utility operations and performance improvement.  
 Venture analysis, development and startup.  
 Project management.  
 Power marketing, trading and risk management.  
 Tariff design and management.

### PRIOR POSITIONS

Senior Vice President for ABB Energy Consulting, responsible for managing consulting engagements for a variety of US and European energy firms.  
 Principal for Navigant Consulting, Inc., involved in numerous consulting engagements serving the electric utility industry in competitive initiatives.  
 Senior Vice President for the Washington International Energy Group, responsible for the firm's competitive positioning practice.  
 Served in a variety of management positions for Pennsylvania Power & Light (now PPL Corporation), including responsibility for strategic business planning, wholesale and retail pricing, bulk power marketing and operations, management of non-utility generation contracts, rates, market research and contract negotiations with large customers. Previous responsibilities included the development and implementation of corporate management programs as well as extensive experience in all elements of nuclear power production.

### SELECTED CONSULTING EXPERIENCE

***Omaha Public Power District.*** – Project Manager and lead consultant for an extensive strategic business planning initiative. This multi-phase project spanned one year and included (1) asset evaluation, estimation of potential stranded costs and stranded cost mitigation strategies; (2) business growth strategies, including retail retention and expansion, new products and services, new utility businesses, wholesale marketing and bulk power trading; (3) corporate restructuring through the formation of four new business units; (4) organization design, including the creation of two new marketing organizations and a new trading floor; and (5) regulatory and legislative strategy development.

***Omaha Public Power District.*** – Project Manager and lead consultant for a follow-up analysis to the above project a year later to recommend added steps and course corrections.

Provided new recommendations on organization design, customer service, stranded costs, energy marketing and trading initiatives, risk management, new business development, new products and services and strategic planning processes.

***Barbados Light & Power Company.*** – Project Manager and lead consultant for a strategic planning initiative. Major areas of attention included new generation options, regulatory strategies, competitive threats, tariff design, new business opportunities, human resource issues, and planning processes.

***Barbados Light & Power Company.*** – Project Manager and lead consultant for the development of a model for the risk analysis of various new generation investments.

***St. Vincent Electricity Services, Ltd.*** – Consulting support for a management audit commissioned by the Board of Directors. Scope included generation, transmission, distribution, organizational assessment, safety, procurement and fuel.

***Lower Colorado River Authority.*** – Consulting support for strategic review and development of alliance strategies. Facilitation of a management workshop to develop strategic responses to key issues and to examine options for strategic alliances.

***Municipal Electric Association (Ontario).*** – Project Manager and lead consultant for the development of a definitive business plan for a new power procurement business on behalf of the Association's more than 250 municipal electric utilities. Work included initial feasibility assessments followed by a complete actionable plan for the creation of the new organization, including structure, organization, staffing, financing, market analysis, contingency plans, product offerings and promotional strategies. The resulting new company became a reality in late 1997.

***ENERconnect (Ontario).*** – Served as interim Vice President of Marketing and Customer Service for the startup of this new power procurement and services company. Project Manager and lead consultant for the development of a detailed operational plan for startup. Assisted in all aspects of startup including organizational design, business strategies, product design and development and support to executive management and the Board.

***Public Service Commission of Maryland.*** – Provided consulting support to the PSC in the approval of the settlement agreement relating to Standard Offer Service (SOS).

***New York Power Authority.*** – Consulting support for an internally sponsored audit of energy risk management functions.

***SaskPower (Saskatchewan).*** - Project Manager and lead consultant for the expansion of the bulk power marketing program and creation of an energy trading floor. Work included extensive recommendations on corporate structure, organization, trading and marketing strategies, trading floor characteristics, management controls, risk management strategies, training, alliance building and external interfaces.

***SaskPower.*** – Project Manager and lead consultant for development of a strategic plan for the Power Production Business Unit. The project included asset valuation and optimization, efficiency improvement, market analysis and organizational options.

***4-County Electric Cooperative.*** - Strategic planning support for the Chief Executive Officer and Board of Directors. Designed and facilitated a planning workshop for the Board of Directors and key managers. Followed up with subsequent action plan for the Board.

***A Canadian Provincial Electric Utility.*** - Strategic planning and business support in the analysis of future generation and transmission options associated with a major new generation construction project.

***BGE Corporation (Constellation Nuclear Services).*** - Project Manager and lead consultant for the business analysis, planning, design and startup of a new subsidiary business for the client. The business, provision of nuclear related services to US and international utilities, was successfully started in July 1999.

***Federal Energy Regulatory Commission (FERC).*** - Consultant supporting an operational review of the California ISO. Examined governance issues, operating procedures, organizational issues, interfaces with stakeholders and recommendations for the restructuring of the industry.

***City of Seattle (Washington).*** - Review of the City's utility, commissioned by City Council and the Office of City Auditor, to analyze financial strategies, power marketing and risk management strategies and governance schemes.

***Alberta Electric System Operator.*** - Analysis of transmission loss methodologies for the Alberta market.

***Electricité de France.*** - Provided support in the planning, analysis, structure and negotiation of a large international energy trading and marketing alliance.

***Electricité de France.*** - Provided business planning and analysis services in the furtherance of the utility's wholesale and retail businesses. The work included research and analysis of potential gas partnerships, trading alliances and development of new retail markets throughout Europe.

***Electricité de France.*** - Supporting services for the implementation of a large trading and marketing alliance in Europe, including reporting and control processes and training workshops for employees.

***Tennessee Valley Public Power Association.*** - Project Manager and lead consultant for a survey and analysis of the Association's more than 150 member utilities. Produced an analysis with recommendations for the products and services that can best serve the members in a deregulated environment.

***Tennessee Valley Public Power Association.*** - Project Manager and lead consultant for development of a comprehensive new business strategy that reinvented the Association for a competitive environment. Key elements of the plan included a new expanded focus on government relations and the influencing of public policy, as well as the creation of four newly created business units and business endeavors.

*ABB Energy Solution Partners.* – Consulting support for ESP-sponsored projects, including customer and project research, project structure, energy supply options, alliances, and preparation of proposals. Included regulatory research and discussions in Nevada, Michigan, New Jersey and New York.

*Ambient Corporation.* – Consulting support for strategic and tactical business planning for this startup firm specializing in power line communications (PLC), including development of commercialization plan and supporting management processes, support of business plan, product and service development, regulatory strategies and financing documentation.

*ElectriCities of North Carolina.* – Consultant supporting business simulations and strategic planning for the North Carolina Power Agencies.

*ElectriCities of North Carolina.* – Consultant supporting analysis of the Carolina P&L – Florida Progress merger with resulting strategies and negotiations on behalf of ElectriCities.

*City Council of Los Angeles (California).* - Advice to the Council on the strategic plans of its municipal electric utility. Conduct of a workshop for the Council and staff on restructuring and competitive issues. Review of power marketing alliance strategies.

*Riverside Public Utilities (California).* - Analysis of the potential to sell all or part of the utility. Development of a new business vision and strategy. Analysis of outsourcing and alliance possibilities. Development of a power supply alliance, including design of the venture, development of RFP, evaluation of bidders, selection of finalist and negotiations. Organizational design and implementation. Planning and project management support for activities leading to open access.

*A Large Canadian Provincial Electric Utility.* - Business planning support for the transmission business unit. Analysis of the business potential of new transmission opportunities. Analysis of US transmission policies and their potential impact on a Canadian player in the US markets.

*PacifiCorp.* - Customer research with two groups of large industrial and commercial customers. Designed and managed interactive workshops to obtain their input, served as subject matter expert for the sessions, produced and presented comprehensive analyses of the results with strategic insights for the client's marketing initiatives.

## **EDUCATION / CERTIFICATIONS**

M.S. in Nuclear Engineering from Columbia University.  
B.E.E. (Electrical Engineering) from Villanova University.  
Registered Professional Engineer – Pennsylvania.

## **SPEECHES AND ARTICLES**

“Risk Analysis of New Generation Options”, Carilec Engineers Conference – July 2003.

“Strategic Alliances in the New Utility Marketplace”, Utility Technology Expo and Conference – October 1998.

“Opportunity is Knocking – Are Co-op’s Ready?”, Cooperative Finance Corporation Annual Meeting – July 1998.

“Strategic Alliances: The Answer to All Our Problems (?)”, California Municipal Utility Association Annual Meeting – April 1998.

“Customer Service Under Deregulation”, D-21, the international utility economic development group – September 1997.

“It’s a New Day: Are Co-op’s Ready to Win”, Cooperative Finance Corporation’s Independent Borrowers Conference – July 1997.

“Winners and Losers”, Rural Electric Management Development Council – May 1997.

“Forecasting Trends in the New Energy Industry”, Tennessee Valley Public Power Association Annual Conference – May 1997.

“The Challenges of Change: National and Regional Perspectives”, Tennessee Valley Public Power Association Legal Conference – February 1997.

Presentations in 1996 to the TVPPA Customer Service Conference, TVPPA Annual Meeting and the Northwest Public Power Association (NWPPA) Conference.

**SELECTED PUBLICATIONS:**

“Unexpected Lessons from Visiting a Japanese Company” - *Journal of Management Inquiry*, September, 1992.

“Momentum Theory - A New Technique for Cost Analysis” - *AACE International*, 1991.

“Electric Utility Staffing Issues” - *American Power Conference*, 1990.

“Cost Effectiveness via Modification of Organizational Culture” - *AACE In Registered*.

## RESUME OF MR. DONALD R. PALYS, P.E.

### SENIOR TECHNICAL CONSULTANT

#### AREAS OF SPECIALIZATION

Mr. Pals has over 28 years of experience in the electric utility, process and heavy manufacturing industries. He has served as a Manager with hands-on experience and Consultant in a number of areas related to distribution electrical systems. He managed a number of engineers and designers in the development of projects constructing high and low voltage power distribution conductors, transformation, switchgear, instrumentation and control practices for utility organizations and industrial corporations. His experience with projects such as this makes him an excellent candidate for Project Manager.

#### SELECTED CONSULTING EXPERIENCE

*Commonwealth Edison* - Lead Consultant on assessment of eight major outages suffered during the summer of 1999. Duties included inspections of manholes and cable vaults where failure occurred. Development of assessment on reasons, including recommendations for repair.

*Black & Veatch* - Program/Project Manager responsible for multiple turnkey EPC projects, concurrently in progress under the New York Power Authority's Electrotechnologies Program. Contract scope included study, recommendation, design and build functions. The DSM/energy efficiency improvement projects, were at various large NYPA customers located within NY City. Representative projects involved expansion, upgrading, or newly integrated central chilled water plant installations, at educational and health care campuses, with added capacities of 3,000 to 8,000 T. Major components included package chillers, cooling towers, condenser and chilled water distribution piping, electrical utility interface, transformation, primary and secondary power distribution, switchgear, instrumentation and control, sitework and utilities, structure, demolition, etc. Determinations of individual project viability were closely tied to payback from projected savings due to efficiency improvement based reductions in energy consumption.

*Black & Veatch -Electrical Manager* responsible for performance of an electrical discipline group of up to 20 engineers, designers, technicians, in conduct of industrial, university and utility oriented practice. Major clients included various IBM facilities, AT&T, NYNEX DASNY, Dartmouth, Vassar and several other college campuses, Central Hudson Gas & Electric and numerous others. Extensive experience within process environments highlights knowledge of, and sensitivity to, the impact of schedules and downtime with emphasis upon safety, reliability, efficiency, maintainability and cost effectiveness. Activities included stand-alone electrical prime, and electrical support of multi-discipline projects.

Low, medium, and high voltage power distribution, 120 V thru 115 kV, included many combinations of subsurface & overhead conductoring; transformation; new switchgear and modifications to existing; overcurrent & overvoltage protection; emergency, standby, peak shaving generation; power quality investigations; lightning protection.



## Resume of Mr. Donald R. Palys, P.E.

Instrumentation & Control included individual stand-alone PLC, DDC, loop control, relay logic, as well as integrated applications in conjunction with DCS and SCADA systems via copper conductor and/or fiber optic data highway. Motor control implementations included the variety of full & reduced voltage, solid state, and variable frequency equipment.

Multi-functional responsibility included individual project management, project engineering, business unit co-management, marketing and business development, preparation of proposals and estimates, contract negotiation, and litigation support as expert witness.

*Pacific Gas and Electric Company* - As Inspection Engineer, performed engineering/quality based audits at suppliers of electrical and gas distribution products. On-site evaluation of production and QA methods, capabilities, and compliance with specifications. Resolution of design, manufacturing and product failure problems was routine. Contributed to revision of several distribution product standards. Travel primarily within the eastern half of the country.

*Consulting Engineer* - Sole proprietorship in conduct of a consulting engineering practice, self limited to electrical power distribution, control and utilization. Services were provided primarily to upstate NY process industries (paper, glass, chemicals), from his Syracuse offices. Full engineering services included: specification and design; surveys of existing systems, equipment & operations; planning and recommendations regarding installation, upgrading & expansion; preparation of project budget estimates; bid & contract documents; evaluation of quotations & bids; construction monitoring. Clients included Crown Zellerbach Corp, Corning Glass Works, IBM, others. Membership was maintained, through 1986, in the American Consulting Engineers Council.

*Bussmann Manufacturing Div., McGraw-Edison Co.* - District Manager responsible, in central New York State, for applications & sales engineering of fusible overcurrent protective devices for medium & low voltage power systems, control and electronic circuitry. With emphasis upon an engineering based market approach, conducted numerous seminars and participated in others' instructional activities stressing proper engineering practice in selection & application of electrical system components & protective equipment, based upon circuit characteristics, component withstand capabilities, and code compliance.

## **EDUCATION**

BS, Electrical Engineering, State University NY at Buffalo

Subsequent course attendance includes: Substation Engineering; Grounding & Relaying Applications; Power Systems Transient Analysis & Surge Protection.

Member of IEEE Industry Applications, Engineering management, and several Power Engineering Societies.

Licensed Professional Engineer: New York, New Jersey.

## RESUME OF MR. MICHAEL C. BOISMENU, P.E.

### AREAS OF SPECIALIZATION

Significant experience in power plant and T&D engineering, management, maintenance and operations. Detailed electrical and controls engineering, project management, managerial, asset management and leadership experience in a variety of diverse technical areas. Strong interpersonal and technical skills coupled with a participative and collaborative management style in support of effective teamwork and consensus building. The ability to incent people to take action, spur innovation and continual improvement.

### SUMMARY OF CONSULTING AND WORK EXPERIENCE

Consultant to a large engineering design firm in the northeast that provides services to utilities and industrial companies.

Consultant to a T&D maintenance company In Florida that provides support to utilities, and large companies.

#### **NRG Dunkirk Operations Inc. - Plant Manager Dunkirk Generating Station, Dunkirk, New York, 1999 - 2003**

Provided total Operation and Maintenance leadership for the Station in the non-regulated electric supply business. Provided a direct interface with the Corporation's Operations leadership, Asset Management and Power Marketing organizations. The Dunkirk Generating Station is a 600mw coal fired facility with CE steam generators and GE turbine generators.

- Provided the leadership to successfully transition the workforce from the regulated electric generation business to a non-regulated electric generation competitor.
- Completed a Station Reliability Assessment and Root Cause Analysis Program, recommended targeted projects for Owner approval, and completed all projects on schedule and under budget, which resulted in a 10% improvement in Station availability and a continued reduction in Heat Rate.
- Through targeted attrition and position abolishment's reduced the staffing level from 208 to 125 employees. This coupled with innovative partnering agreements with vendors resulted in a reduction of the Station's Operation and Maintenance budget by 45% from 1994 levels.
- Through active involvement with the local business community, was instrumental in negotiating a property tax PILOT agreement, which resulted in a \$2 million reduction in property taxes.

- Provided an assessment of the Big Cajun II operation and maintenance process. Resulted in a significant improvement in availability and a more functional and responsive organization design.
- Completed the assignment as NRG's interim Regional Director of Operations in the Mid-Atlantic Region. A combination of Station physical, organizational and employee development and improvement programs contributed to the significant reduction in the Indian River Station's forced outage rate. Was offered the position on a permanent basis. Mid-Atlantic Region included CE and Foster Wheeler coal fired steam generators with GE, Westinghouse and Siemens turbine generators and Pratt simple cycle gas turbines.
- Completed the assignment as interim Regional Director of Operations for NRG's New York Region. Finalized the Regional plan for emergence from bankruptcy, redirected the Region to assure appropriate input from each Station and coordinated the Company's response to the 2003 Blackout. Was offered the position on a permanent basis. New York Region included CE, B&W and Foster Wheeler coal fired steam generators with GE, Westinghouse and Siemens turbine generators and Pratt and Westinghouse simple cycle gas turbines.

### **Niagara Mohawk Power Corporation**

#### **Plant Manager Dunkirk Steam Station, Dunkirk, New York, 1995 - 1999**

Provided total asset management and leadership for the Station in the evolving electric supply business.

- Provided leadership to maximize the effectiveness of teamwork via the General Electric Workout process for which the Station received a Corporate Exceptional Service Award.
- Recipient of the NMPC Organizational Development Department award for affecting employee development programs.
- Instrumental in the successful negotiation and settlement of the long-standing real estate tax litigation case with the City of Dunkirk. Resulted in savings of **\$80 million** through the term of the agreement.
- Improved the overall image of the Company through participation in Chautauqua County Reengineering Initiative and the associated Implementation Steering Committee.

#### **Director Value Engineering, Syracuse, New York 1989-1995**

- Provided leadership and direction for a multi-disciplined team of Company and Industry recognized experts. Group's functions included Value Engineering, Engineering Standards, Reliability Engineering and Strategic Asset Management.
- Active participation on the Corporation's Environmental Awareness Initiative self-assessment team.
- Active participation in the Redesign of the Fossil Generation Capital Projects Process.
- Provided significant input in the development and deployment of a Component Availability Data System to enable the Fossil Station to focus resources on major availability detractors.
- Conceptualized and directed the development of an Automated Distribution Station Design System. Resulted in a significant reduction in electric station engineering and design time.
- Directed the automation of the Company's Engineering Standards resulting in a significant improvement in the Line Department's performance.

**Supervisor Fossil Engineering Electric Design Group, Syracuse, New York, 1986 – 1989**

- Provided leadership and direction for a group of professionals, which provided the Electrical Engineering and Design for all Fossil Station electrical projects.
- Group doubled its associated output while maintaining all budget estimates.
- Provided root cause and forensic analysis for a variety of complex projects.

**Fossil Engineering Project Manager, Syracuse, New York, 1981 – 1986**

Provided conceptual engineering, project management and detailed design for a variety of complex nuclear, fossil, hydro and electric station projects.

- Developed and implemented the Fossil System Combustion Control Upgrade Project. Received recognition from the customer for completing a high quality project on time and under budget.

**Electrical Engineering Designer, Buffalo & Syracuse, New York, 1968 – 1981**

Provided the detailed engineering and design for a variety of complex electrical projects.

**EDUCATION:**

- Lemoyne College, Syracuse, New York, Masters in Business Administration (in progress)
- Erie County Technical Institute, Buffalo, New York, Electrical and Electronics Engineering Technology
- Registered Professional Engineer February 1987

**AFFILIATIONS:**

- Institute of Electrical and Electronic Engineers
- Power Engineering Society

## RESUME OF MR. DOUGLAS H. TULLEY, P.E.

### AREAS OF SPECIALIZATION

Electric utility veteran with very diverse work experiences in Field Operations. (Construction, maintenance, operations and emergency restoration). Supervisor/Manager responsibilities have included: Electric Substations, Hydro Electric Generation, Relay & Telecommunications, Meter & Test, Field Service, Underground Network, Heavy Construction, Crane & Rigging Services, Street Lighting, Substation Design, and Electric & Gas Distribution Design.

### SUMMARY OF CONSULTING AND WORK EXPERIENCE

Kelly Engineering Services-Buffalo, New York. Responsible for preparing and implementing key elements of National Grid's Work Continuation Plan for its New York Operations.

- Developed customized skills and safety training plans for all management employees, retirees and contractors. Multiple training classes were set up around the State for 'hands on' courses and a unique DVD created for home study. A thousand plus employees completed the training in a 90 day time period.
- Lead the effort to create specialty maps for the protection and aid of field workers. Eight very detailed and accurate regional map books, depicting the complete inventory of New York Operation's transmission and substations assets, were compiled and published. The map books are considered one of the biggest successes of the Work Continuation Planning effort.

Manager, Energy Services - Western Division. Senior manager responsible for a number of Field Operating units in Niagara Mohawk's, a National Grid Company, largest division.

- Recognized for consistently exceeding goals, particularly in the area of safety performance. Reorganization and efficiency improvements helped reduce staffing and department expenses approximately 30%. Lost Work Day Cases were reduced to zero in several departments. Recipient of several corporate and divisional awards.
- Selected to work on three major external audit/consultant teams charged with improving service reliability, operating efficiencies and customer satisfaction in New York Operations.

Director, Energy Supply & Delivery-Northeast Region. Niagara Mohawk Power Corporation. Primary responsibilities included rebuilding, upgrading, operating and maintaining hydro generating plants and equipment and electric substations in Niagara Mohawk's second largest geographical region. Achieved significant improvements in generator unit availability, substation equipment reliability and cost management. There was extensive interaction with contractors, vendors, engineering services and regulatory agencies.

Supervisor, Electric and Gas Distribution Design-Northern Area. Niagara Mohawk Power Corporation. Supervised a group responsible for the major reconfiguration and upgrading of electrical and gas distribution assets in a rapid growth area in eastern New York State. Detailed specifications and drawings were generated for both in-house and contractor crews. The completed projects stabilized the systems, improved their reliability and continues to provide the capacity for ongoing load growth.

**EDUCATION**

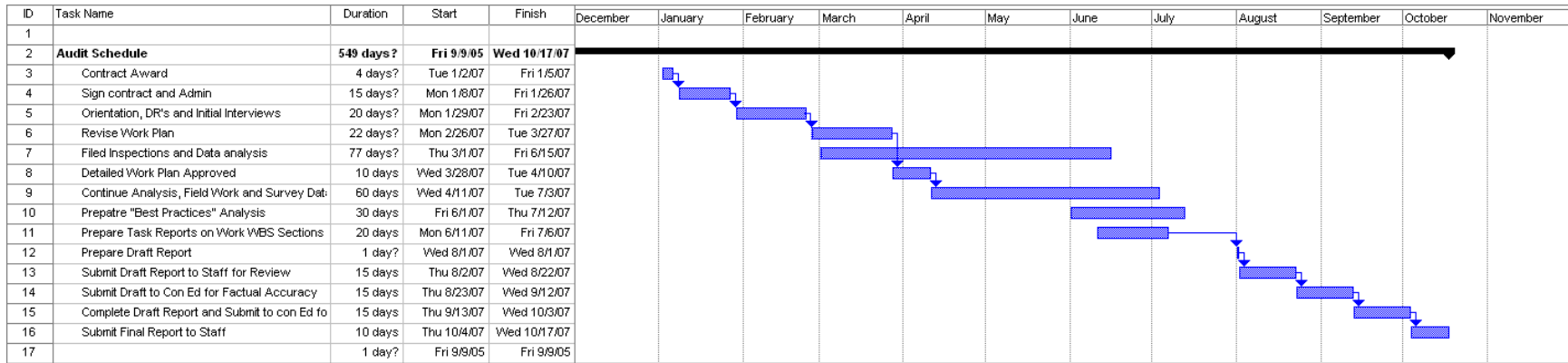
Bachelor of Science from Clarkson University, Potsdam, New York.

## 6. SCHEDULES AND BUDGETS

### SCHEDULE

Our schedule follows.





## PROJECT COST

### HOURS, FEES, AND EXPENSES

The rates provided below are standard hourly rates, based on an eight-hour day. These rates will remain in effect for the length of the project and testimony (180 days).

Table 1 provides a summary of our “Not to Exceed” fees and expenses, as well as a breakdown of these fees and expenses. The schedule duration, complexity, and uncertainty as to the scope of each task has led us to propose a preliminary distribution of hours by consultant. After the project is awarded, the Vantage team will meet with the Staff Project Officer to determine the most appropriate hourly distribution for this assignment.

We agree to comply with the retention policy for this Project.

Con Edison Reliability Audit Hour and Fee Calculation						
	Project Manager Drabinski	Senior Consultant	Senior Engineer	Project Admin Squilletts	Total Hours	Total Fees
	\$260	\$240	\$225	\$60		
Task 1 – Outage Planning/Preparedness	280	800	560	160	1800	\$400,400
Task 2 – Emergency Outage Performance/Effectiveness	120	280	240	160	800	\$162,000
Task 3 – Outage Planning Best Practices	160	280	200	160	800	\$163,400
<b>Project Total Hours</b>	<b>560</b>	<b>1,360</b>	<b>1,000</b>	<b>480</b>	<b>3,400</b>	
<b>Project Total Fees</b>	<b>\$145,600</b>	<b>\$326,400</b>	<b>\$225,000</b>	<b>\$28,800</b>		<b>\$725,800</b>
<b>Estimated Travel Expenses</b>						
Onsite Percentage	50%					
Hours per trip	32					
Hotel cost per trip	\$600					
Airfare per trip	\$500					
Per diem per trip	\$400					
Cost per trip	\$1,500					
Number of consultant trips	50					
<b>Travel Expenses</b>	<b>\$75,000</b>					
<b>Total Project Cost</b>	<b>\$800,800</b>					

### INVOICING

Invoices will be submitted monthly and are due 10 days after submitted to Company.  
Invoice backup will include:

- A breakdown of charges by consultant and expense category.
- Time and expense reports for each consultant and staff person.

- Copies of all pertinent expense receipts. Receipts for all expenses over \$25 will be provided.
- Percentage of work completed.

## **PERSONAL EXPENSE POLICY**

Our overall policy is that individual consultants and the firm be reimbursed for direct expenses incurred in conducting the assignment. In general, our policy provides that:

- Personal mileage is reimbursed at the rate of \$.445 per mile;
- Travel is reimbursed to and from the consultant's home, office, or last work assignment. In cases where a consultant is traveling from another assignment, the cost will be allocated (with documentation) between assignments in an appropriate manner. However, the amount will not be greater than if from the consultant's home;
- Reasonable meals and miscellaneous expenses are charged at cost;
- Communication, copying, and mail costs are charged at cost.

## **INSURANCE COVERAGE**

Vantage carries extensive insurance coverage for assignments of this type, including:

- Personal Liability coverage of \$1,000,000 per occurrence.
- Automobile coverage of \$1,000,000 per occurrence.
- Appropriate workers' compensation and disability insurance for all employees.

## 7. QUALIFICATIONS OF THE FIRM

### A. VANTAGE CONSULTING INC.

22814 Overseas Hwy.

Cudjoe Key, FL 33042

Tel. (305) 744-3440/Fax (305) 744-3450

Web Site: [WWW.VANTAGECONSULTING.COM](http://WWW.VANTAGECONSULTING.COM)

E-MAIL: [WDRABINSKI@VANTAGECONSULTING.COM](mailto:WDRABINSKI@VANTAGECONSULTING.COM)

Federal Tax ID #: 23-2681-458

263 County Road 452

PO Box 7399. PMB# 293

Breckenridge, CO 80424-7399

Tel./Fax. 970-547-4486

Vantage Consulting Inc. (Vantage) is a management consulting firm headquartered in Cudjoe Key, Florida, with an additional office located in Breckenridge, Colorado. Vantage consultants possess a broad background in all business aspects of electric, gas, and water utilities, but retain particular expertise in utility operating functions.

The Vantage team consists of highly experienced, trained consultants, covering virtually all functional work areas within a utility company. Vantage is staffed by a total of 20 full-time and contract consultants and administrative staff. Consultants have a diverse set of backgrounds, including engineering, accounting, economics, finance, chemistry, and psychology.

Vantage provides a broad range of consulting services to investor-owned utilities, independent power producers, regulatory agencies, state planning and environmental agencies, and law firms. While the majority of our assignments are tailored to the needs of the client, there are specific products and services which we offer. The functional service areas in which we work, and the consulting topics to which we provide expertise are listed below.

## B. SERVICE AREAS

### Utility Regulatory Issues

- Develop/Monitor/Evaluate PBR and Incentive Ratemaking
- Utility Competition and Restructuring Analysis
- Stranded Cost and Unbundling Issues
- Merger and Acquisition Strategic and Regulatory Assessments
- Energy Policy Act Review & Strategies
- Tariff & Rate Strategy (Electric & Gas)
- Focused & Comprehensive Management Audits

### Strategic and Organizational Planning

- Corporate Organizational Assessments and Business Plan Development
- Business Unit Process Reengineering
- Marketing Plan Development and Assessment
- Application of **POWERFIN**<sup>®</sup> - New Generation Assessment Software
- Regional Wholesale Power Competition
- Litigation Support on Prudence Issues

### Power Generation

- Culture Modification Process
- Plant Organization and Staffing
- Plant Economics
- Plant Maintenance
- Performance Enhancement
- Fuels Management
- Human Resources
- Safety
- Environmental
- Human Resources/Labor Management
- Diversity/Affirmative Action Programs
- Job Process Analysis
- Pay Structuring and Flexible Labor Contracts
- Skills and Knowledge-Based Training
- Mutual Gains and Continuous Improvement Programs

### Electric and Gas Retail Operations

- Management and Business Process Performance Assessments
- Retail Marketing Strategy Development and Implementation Support
- Work Management System Design and Implementation Support
- Pipeline Replacement Evaluation & Prioritization Programs (OPTIMAIN)
- Leak Management Program Design, Integration, and Implementation

- Automated Mapping and Facilities Management/GIS Feasibility Assessments and Vendor Selection

### **Environmental Compliance and Strategies**

- CAA Strategies (Titles I-XI)
- Economic Development in Non-Attainment Areas
- Protocol Development & Implementation
- Environmental Performance Opportunities
- Emission Credit Inventory Database
- Equipment/Plant Environmental Risk Assessment

## C. RECENT ASSIGNMENTS AND CLIENTS

The following short synopsis provides a montage of our most recent assignments.

### Regulatory Strategy

- Provided regulatory strategy and analysis to a group of northeast utilities regarding the formation of a Gridco that would own and operate transmission systems both within and outside of current ISOs.
- Analyzed the Public Service Electric and Gas Restructuring Plan in preparation for deregulation in the state of New Jersey. This evaluation included analysis and recommendations regarding the stranded cost estimates, cost of service unbundling studies, and policy issues associated with restructuring. As part of the project, Vantage and its subcontractors developed independent assessments of energy and capacity values in the future and analyzed issues of market power. Our financial model was used to calculate potential rate reductions under varying regulatory scenarios.
- Completed a series of Performance Based Ratemaking (PBR) studies for San Diego Gas & Electric. This independent analysis provided many insights into what will be necessary in the development of distribution, generation, and gas PBRs. Specific projects included:
  - Mid-term and final review of the Generation and Dispatch mechanism;
  - Mid-term and final review of the Gas Procurement mechanism;
  - Mid-term review of the Base Rates PBR mechanism.
- Assisted Kentucky Utilities in a complex regulatory proceeding which addressed the fuel component of its rates. Issues included transmission line losses and the differentiation between FERC and state responsibilities.

### Merger Strategy and Integration

- Provided strategy in the regulatory approval process for merger of Louisville Gas and Electric and Kentucky Utilities. Support included a regulatory risk assessment, preparation of testimony and response to interrogatories, witness preparation, as well as an analysis and development of testimony regarding the independent synergy study.
- Assisted a mid-west electric utility in an acquisition search. The Utility took advantage of our knowledge of East Coast utilities, our understanding of operational strengths and weaknesses, and our familiarity with state regulatory filings to gather key competitive and business information about a potential acquisition target.

## Operational Audits and Development

- Performed an affiliate compliance audit at the request of SEMPRA Energy of San Diego Gas & Electric and Southern California Gas Company. Audits addressed compliance of company affiliate plans with PUC requirements and compliance of employees with the plans.
- Completed a review of all transactions between Entergy and its non-regulated affiliates as part of a settlement agreement with the SEC. On this assignment, we reviewed many of the details of Entergy's non-regulated business activities, including plans for expansion of utility services, both domestically and internationally.
- Performed a benchmarking study that addressed governmental affairs functions for a mid-west utility. Benchmarking included both utility and non-utility organizations.
- Recently completed focused, comprehensive management audit reviews of Duquesne Light Company, Louisville Gas & Electric Company, and Kentucky Utilities Company. In addition, our consultants have performed similar audits of approximately 20 other electric, gas, water, and telephone utilities.

## New Business Development

- Completed a review of administrative services provided by the four California IOUs to Energy Service Companies (ESCO) and identified opportunities and markets as part of the recent DSM pilot program. This assignment provided an excellent understanding of the approach the four California IOUs have for providing future DSM and energy programs, as well as an understanding of the potential role ESCOs will provide in the future.
- Retained by Energy Connections, a jointly-owned subsidiary of Ameritech and Wisconsin Electric, to support the commercialization of a state-of-the-art two-way communications network. The objective of this network was to expand an electric utility's ability to develop, test market, and offer value added services designed to enhance revenues, improve service quality, and retain current electric rates.
- Performed an assessment of PG&E's venture into maintaining natural gas vehicles for non-utility users. Analysis looked at economics and regulatory requirements.



## Regulatory and Legal Support

- Supported development of the Draft Environmental Impact Statement for the Mega-NOPR (FERC Order 888 and 889). The analysis included emerging transmission technologies that would enhance competition and develop the industry structure scenarios used to assess the environmental impact of a competitive energy market.
- Assisted numerous utilities in preparing and filing rate cases, including five nuclear prudence reviews and dozens of general and fuel cases.

Company	Project
Allegheny Power Systems	Fuel Procurement Review
Alltel of Pennsylvania	Comprehensive Operations Review
Ameritech	Comprehensive Operations Review
Anchorage Telephone	Assisted the employee union in its determination of an employee buy-out of the company.
Arbitration Proceedings	Arbitration proceedings including testimony for the states of Virginia, Mississippi, Idaho, and New Jersey. Also served as arbitrator in ATT vs. GTE in Nebraska and ATT vs. U S WEST in North Dakota.
AT&T	Conducted an assessment of state and federal regulatory reform initiatives.
AT&T	Managed a litigation support team of 14 individuals assisting external legal counsel in an arbitration dispute.
Bell Atlantic - District of Columbia	Comprehensive Operations Review
Bell Atlantic - New Jersey	Developed a cost activity analysis
Bell Atlantic Pennsylvania	As part of a comprehensive management examination for the state of Pennsylvania.
BellCore	Marketing study to determine billing and collection costs.
BellCore/BellSouth	A study of service costing systems.
BellSouth Services	Review of technical training
C&P of Maryland	Affiliate Transactions Review
Choptank Electric Cooperative	Organizational Review
Cleveland Electric Illuminating	Fuel Procurement Review
Columbia Gas of Maryland	Fuel Procurement Review
Columbus Southern Company	Fuel Procurement Review
Connecticut Natural Gas Company	Optimain - replacement evaluation prioritization
Contel California (Verizon)	Attestation Examination
Contel Service Corporation	Mgmt. and financial info. systems rollouts.
Dayton Power & Light Company	Fuel Procurement Review
Duquesne Light Company	Comprehensive Operations Review
Entergy Corporation	Affiliate Transactions Review
East Kentucky Power Cooperative	Fuel Procurement Review
El Paso Natural Gas Company	Business Unit Reorganization, Reengineering
General Waterworks Company	Comprehensive Operations Review
GTE North of Illinois	Comprehensive Operations Review
GTE of California	Attestation Examination
GTE South of Kentucky	Comprehensive Operations Review
Hampton Roads, Va. Planning Com.	Emissions Credits Banking Strategy
Houston Light and Power	Nuclear Prudence Review
Illinois Bell Telephone	Affiliate Transactions Review

Kentucky American Water Company	Comprehensive Operations Review
Kentucky Utilities Company	Merger Regulatory Support
Kentucky Utilities Company	Governmental Affairs Benchmarking
Kentucky Utilities Company	Comprehensive Operations Review
Louisville Gas & Electric Company	Merger Regulatory Support
Louisville Gas & Electric Company	Comprehensive Operations Review
NECA	Prepared first Access Charge Handbook.
NYTEL	Affiliate Transactions Review
NYNEX, SBC, Cincinnati Bell	Managed the special access-demand reconciliation audits required by the FCC.
National Fuel Gas Company	Optimain - replacement evaluation prioritization
New England Telephone	Affiliate Transactions Review
New York Telephone	Rate case re. allocation of corporate costs.
Pacific Bell	Managed a task force charged with developing the methods and procedures for the Inter-exchange Carrier Service Center.
Pacific Gas & Electric Company	DSM Analysis
PECO Energy	Nuclear Prudence Review
Pennsylvania Power & Light Company	Staffing Review
Philadelphia Gas Works	Operations Review, Capital Project Analysis
Philadelphia Suburban Water Company	Comprehensive Operations Review
Philadelphia Suburban Water Company	Reengineering of Operating Departments
Public Service Co. - New Hampshire	Power Plant Outage Management
Public Service Electric & Gas Company	Restructuring Plan Review
Public Service Electric & Gas Company	Nuclear Prudence Review
Public Service Electric & Gas Company	Generation and Environmental Planning
Public Service Electric & Gas Company	Fossil Generation Rate Case
Public Service Electric & Gas Company	Clean Air Act Compliance
Puerto Rico Telephone Company	Managed FCC Part 64 attestation audit.
Puerto Rico Telephone (Long Distance Co.)	Performed various financial analyses assessing their entry into the long distance marketplace.
Rochester Telephone (Long Distance Co.)	Performed an evaluation of their product profitability system
San Diego Gas & Electric Company	Performance Based Ratemaking
San Diego Gas & Electric Company	DSM Analysis
Southern California Edison	Power Plant Outage Management
Southern California Edison	DSM Analysis
Southern California Gas Company	DSM Analysis
Southern New England Telephone	Technical re. long-run cost modeling docket
Tampa Electric Company	Power Plant Outage Management
Tennessee Public Utility Commission	Infrastructure study of telcos
Toledo Edison Company	Fuel Procurement Review
U S WEST	Evaluation of unregulated services.
U S WEST	Fifteen states affiliated transactions review
U S WEST	Assessed methodology to assign non-PIC selected customers.
Unbundled Network Element Cost Proceedings	Testimony in Virginia and Oklahoma
Union Light Heat & Power	Operations Review
United Telephone of Pennsylvania	Comprehensive Operations Review
United Telephone of Texas	Comprehensive Operations Review
Washington Gas Light	Fuel Procurement Review
West Ohio Gas Company	Gas Procurement Analysis
West Texas Utilities	Comprehensive Operations Review
Western Kentucky Gas	Comprehensive Operations Review

## D. REFERENCES

<b>Client:</b>	Indiana Utility Regulatory Commission
<b>Assignment:</b>	Focused Review & Audit of Service Quality Reporting and OMS/EMS Upgrades of Indianapolis Power & Light Company
<b>Contact:</b>	Mr. Jeffrey A. Willman - External Affairs Manager - Indianapolis Power & Light Company (317) 261-8364
<b>Project Description:</b>	This focused review and audit addresses Indianapolis Power & Light Company's Service Quality Performance and related Quarterly Reports.
<b>Period Worked</b>	2002 - 2005

<b>Client:</b>	Pacific Gas & Electric Company
<b>Assignment:</b>	Audits of Affiliate Rules Compliance per CPUC
<b>Utility:</b>	PG&E, PGE Enterprise and affiliates
<b>Contact:</b>	Mr. Michael T. Chenin, CPA, (415) 973-5844, mtcc@pge.com
<b>Project Description:</b>	Vantage and its consultants have performed three years of annual audits which addressed affiliate rules compliance. T
<b>Period worked</b>	2003, 2004 and 2005

<b>Client:</b>	Kentucky Public Service Commission
<b>Assignment:</b>	Management Audits and Focused Reviews of numerous utilities.
<b>Utility:</b>	LG&E, Kentucky Utilities, ULH&P, West Kentucky Gas, and Kentucky American Water Company
<b>Contact:</b>	Mr. John Rogness, KPSC - Audit Dept. Manager (502) 564-3940
<b>Project Description:</b>	Vantage and its consultants have performed six comprehensive utility management and operations audits in Kentucky.
<b>Period Worked</b>	1997, 1999 and 2000

<b>Client:</b>	City of Seattle
<b>Assignment:</b>	Review of Seattle City Light
<b>Contact:</b>	Ms. Susan Cohen, City Auditor, (206)-233-1093
<b>Project Description:</b>	Vantage provided advice and consulting services to the City Auditor and her staff regarding the Risk Management systems and approach, Governance, Financial and Operational Assessments, Industry Perspectives, Power Marketing and other current issues.
<b>Period Worked:</b>	2002.

<b>Client:</b>	FERC
<b>Assignment:</b>	Operation Audit of California ISO governance and systems
<b>Contact:</b>	Ms. Linda Breathitt (Former FFERC Commissioner), (202) 508-4063
<b>Project Description:</b>	Vantage was retained to review a number of key areas of the ISO's operation, including governance, risk management, operational procedures, and independence. Mr. Drabinski testified before congress on the findings of the audit.
<b>Period Worked</b>	2000

<b>Client:</b>	Public Service Electric & Gas for the New Jersey Board of Public Utilities
<b>Assignment:</b>	Restructuring Plan Evaluation and Competitive Services Audit
<b>Contact:</b>	Mr. Frank Delaney - PSE&G Vice President and Rate Counsel (973) 430-6155
<b>Project Description:</b>	These assignment included running of numerous cost of service studies, functionalization of services, development of plans for unbundling, calculation of stranded costs, assessment of proposed new tariffs and rates, and depreciation rate review. The recent competitive services audit addressed service company cost effectiveness and compliance with affiliate rules.
<b>Period Worked:</b>	1997-1998 and 2000.

