### Resume of Mr. Walter P. Drabinski, BSEE, MBA

*PRESIDENT, VANTAGE ENERGY CONSULTING LLC*

AREAS OF SPECIALIZATION

Mr. Drabinski is President of Vantage Energy Consulting LLC*.* He has almost 40 years of experience in the utility industry as both a utility company manager and a management consultant. His functional expertise includes all aspects of utility strategy, organization, executive and financial management, operations practices, productivity improvement, operations and maintenance, and engineering, environmental and construction management. As a utility manager, Mr. Drabinski held the positions of System Training Director, Fossil Generation; Supervisor, Electrical Maintenance; and Operations Project Engineer for Niagara Mohawk Power Corporation. As a management consulting principal, he has worked for national firms and has been President of Vantage for over 22 years. During that time, he has managed more than 125 consulting engagements, including over 75 state regulatory commissioned audits. A summary of his assignments includes:

* performed 23 comprehensive and focused management audits;
* performed 19 affiliate audits;
* performed 22 fuel audits;
* reviewed 9 environmental compliance plans;
* monitored POLAR auctions 32 times;
* perfumed 11 prudence reviews;
* testified before regulatory bodies approximately 90 times; and
* provided direct consulting advice to approximately 22 utilities or large utility related companies.

Selected Consulting Experience

**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.

**Duke Energy North Carolina** – Project Director for a review of affiliated transactions associated with the Duke Energy, North merger with Progress Energy Carolina of Florida. The project addressed implementation of merger conditions, an audit of affiliate compliance rules. Affiliated transactions were audited, the Cost Allocation Manual was reviewed and services provided by the Duke Service Company were addressed Duke Energy NC – North Carolina Utilities Commission (2014-2015)

**Duke Energy Ohio** – Project Director for a review of affiliated transactions between DEO and its affiliates, parent and other regulated subsidiaries. All aspects of compliance with the merger between Cinergy and Duke Energy were reviewed. Affiliated transactions were audited, the Cost Allocation Manual was reviewed and services provided by the Duke Service Company were addressed.

**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 overruns. 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.

**Duke Energy Kentucky** – Project Director for a review of affiliated transactions between DEO and its affiliates, parent and other regulated subsidiaries. All aspects of compliance with the merger between Cinergy and Duke Energy were reviewed. Affiliated transactions were audited, the Cost Allocation Manual was reviewed and services provided by the Duke Service Company were addressed.

**Duke Energy Indiana** – Project Director for a review of affiliated transactions between DEO and its affiliates, parent and other regulated subsidiaries. All aspects of compliance with the merger between Cinergy and Duke Energy were reviewed. Affiliated transactions were audited, the Cost Allocation Manual was reviewed and services provided by the Duke Service Company were addressed.

**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.

**Indiana Power & Ligh**t – Vantage acted as the evaluator, at the request of the Indiana Utility Regulatory Commission, for a three-year program in which customer service and distribution system reliability are being monitored with penalties for missing targets. A major element of this program was enhanced vegetation control.

**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.

**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.

**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.

**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.

**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.

**Virgin Islands Power & Water Authority (2014-17)** - Diagnostic audit of this electric and water utility that was facing serious financial, operational and infrastructure problems. Vantage conducted a diagnostic audit which then focused on staffing, infrastructure, strategic planning, and other key issues. A broad range of recommendations were developed to reverse the decline of the utility.

**Southern California Edison (2013 - 2015)** - Audit of Southern California Edison’s Reliability Investment Incentive Mechanism (RIIM) program that addressed almost $2 billion in expenditures dedicated to reliability and increases in utility maintenance staffing. This was a unique project because it approaches reliability from an investment standpoint rather than performance measures only. Activities included in the audit consisted of reviews of capital projects for T&D, determination of projects that were reliability related, a review of SAIDI and SAIFI statistics and impacts due to improvement program and assessment of agreed to staffing requirements. Our analysis determined whether the project complied with regulatory orders and statewide standards.

**California Independent System Operator** – Project Director on an Independent Operational Audit of the CAISO for the period of 10/01 to 10/02. This assignment was performed at the request of the FERC and led to a series of five global recommendations. Shortly after the completion of the audit, Mr. Drabinski testified before the House of Representatives, Subcommittee on Subcommittee on Energy Policy, Natural Resources & Regulatory Affairs.

**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.

**Kentucky Public Service Commission (2010-2017)** – Project Director and witness associated with regulatory support related to electric utility generating resource Environmental Cost Recovery (ECR) mechanism for the Kentucky PSC. On this assignment, Vantage consultants reviewed filings from four utilities and then acted as an extension of staff in four separate cases. In total over $5 billion was requested through a separate surcharge after a formal proceeding. Vantage reviewed applications, submitted and reviewed interrogatories, prepared summaries for and briefed the Commissioners and Staff, assisted in hearings and helped draft the final orders.

**Consolidated Edison Company *–*** Performed an audit of emergency restoration and outage planning capabilities for the New York PSC. Audit followed a number of large and highly public outages. Major recommendations were made to develop new strategies and programs for addressing reliability and outage response.

**Kansas City Power & Light Iatan 1&2 (2008-11**) - At the request of the Kansas Corporation Commission (KCC) Staff, provided oversight of the $500 million installation of the Air Quality Control System (AQCS) on the existing (KCP&L) Iatan Unit 1 and monitored construction of the $2 billion Iatan Unit 2 coal fired, supercritical power plant. Reviewed organization, cost, schedule, project controls, contractor performance, contract monitoring, site conditions, and other key attributes associated with a mega-project. Provided regular assessments to the KCC on progress and risks, monitored startup and acceptance testing, and provided testimony in rate cases for both Iatan 1 and 2, with recommendations for almost $240 million in prudence disallowances.

**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 reallocation 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 Nondiscrimination Standards, Disclosure and Information Standards, and Competitive Services. Recommendations from these reports addressed means of improving compliance.

**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.

**Maryland Public Service Commission** – Provided technical support in hearings and development of a final order relative to developing a formal procedure for addressing Standard Offer Service (SOS) supplies for its four electric utilities.

**North West Energy** – **Mill Creek Station (2010-2012)** - Provided input to the Company and PSC on the use and implementation of this three-unit 150 MW combustion turbine power plant. Monitored construction, startup and initial operation. Visited construction site on a regular basis and provided input to the construction team as well as the Montana PSC. Reviewed quarterly reports and testified before the Commission after each report. Provided insight on in-service criteria testing and other key design and operational elements.

**Pacific Gas & Electric Co.–** Project Director for affiliated audit for 2001, 2002, 2003, 2004 and 2005 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.

**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.

**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.

**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, performance and culture changes that were impacted by the two-year experimental program. While involved in this project, Mr. Drabinski developed an understanding of the SDG&E holding company formation and its interaction with the proposed industry restructuring.

**New Jersey Board of Public Utilities** – Director on major project to review hedging practices of the four gas distribution utilities in New Jersey. Working with Pace Energy as a sub-contractor, alternate hedging strategies were developed and proposed using more advanced techniques, including options.

**FERC** – Interfaced with Commission and its 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.

**Maryland Public Service Commission** – Monitored all RFP solicitations for 2007 and 2008 bid years. This amounted to nine solicitations for all four utilities in Maryland. Provided oversight on bid day, reviewed applications, provided confidential analysis and briefings to the Commissioners and testified on results.

**Cumberland Valley Electric Cooperative** – Performed a focused management audit of this small, rural cooperative. Worked with management to develop transition to new management team.

**Alleghany Power Virginia** – Monitored RFP solicitations for 2007 and 2008 bid years. Provided oversight on bid day, reviewed applications, provided a final report on results for the Virginia regulatory agencies.

**Delaware Public Service Commission** – Monitored all RFP solicitations for 2006 bid year. Provided oversight on bid day, reviewed applications, provided confidential analysis and briefings to the Commissioners and testified on results.

**California Public Utilities Commission Telco Division (Attestation Exams**) – Mr. Drabinski was the Project Director on seven separate assignments for the CPUC during the period of 2000 to 2002. These included:

* examinations of surcharge collections of “high cost fund” and “teleconnect fund” amounts for AT&T, Verizon, Sprint, and PacBell. In each project significant accounting, interpretational and transmittal errors were discovered, leading to the recovery of amounts well in excess of project costs;
* examinations of claims requests of “high cost fund” and “teleconnect fund” for Verizon, PacBell, and Roseville.

**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.

**PJM Power Plant Arbitration** – Provided testimony and technical assistance on arbitration for an independent power plant built in the PJM region. Issues involved interpretation of PJM rules and contractual issues such as commercial operation date and performance guarantees.

**St. Vincent Energy Services Ltd**. - At the request of the Board of Directors and Prime Minister, Vantage conducted a review of system reliability and fuel procurement. Significant findings resulted in a new strategic plan, a reorganization of management and a legal investigation into procurement practices.

**Maryland Public Service Commission** – Provided analysis and related testimony on restructuring-related cases in 2007 and 2008. Testimony involved wholesale market issues, portfolio options and rebuttal relative to utility witnesses.

**Massachusetts Municipal Wholesale Electric Utility** – Performed analysis on options for equipment upgrades at major facility and performed limited life extension analysis.

**Seattle City Light–** Conducted a controversial audit of Seattle City Light’s financial, risk management and governance structure. Serious issues regarding debt, O&M and Capital expenditures were raised. Major recommendations on risk management were developed.

**New Hampshire Public Service Commission *–*** Provided technical and strategic assistance under a long-term contract on transmissions and distribution issues. These included ISO strategies, local distribution reliability, asset decisions and general regional concerns.

**Arizona Corporation Commission** – Provided assistance to the Commission Staff and Commissioners on all restructuring issues under consideration. This includes development of an ISO. The reorganization of cooperatives and G&Ts for deregulation. Development of solutions regarding high costs resulting from California related issues. Reassessment 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 are listed below.

* 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 CO2 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 and 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 NOx emission trading within NESCAUM.

**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.

**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 was up for renewal and, as such, was of great interest to the Company and regulators.

**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.

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

**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.

**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.

**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 executive management, strategic planning, affiliated relations, and financial management.

**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.

**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.

**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 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.

**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.

**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 eleven 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 thirty 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.

* Cases 09-246 and 10-1025 for the Kansas Corporation Commission. Provided direct testimony on prudence of construction for Iatan 1 and Iatan 2 coal fired power plants.
* Montana PSC – Testify quarterly in results of monitoring Mill Creek power plant construction project.
* Case 99-434 Bell South of Kentucky. Audit and modification of Price Regulation Plan.
* Maryland PSC – Testified approximately 20 times on Provider of Last Resort (POLR) rules, regulation and energy solicitation results.
* Duquesne Light Company – Testified six times regarding POLR solicitations.
* CPUC Telco cases – Testified on eight occasions regarding results of attestation exams of Verizon, PacBell, Sprint, AT&T, and Roseville.
* Testified after acting as independent monitor during energy solicitations in Delaware (2 occasions)
* 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.

### Education

* BSEE from SUNY Buffalo with a concentration in power engineering, including transmission line and large equipment analysis;
* MBA in Finance and Entrepreneurial Management from the Wharton School;
* Approximately 40 seminars on power plants, transmission and distribution system design and maintenance.

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.