

Name: FRANK T. DiPALMA

Title: Partner/Principal

Education: Fairleigh Dickinson University, MBA Management/Finance
New Jersey Institute of Technology, BS Mechanical Engineering
University of Michigan, Executive Development Program

Professional Affiliations: American Gas Association
Society of Gas Operators
Institute of Electrical and Electronics Engineers (Past Member)
University of West Virginia, Institute of Technology (Adjunct Professor)

Career Synopsis:

An operations oriented engagement/project manager who leads teams of consultants to resolve complex business problems in power generation and energy transmission and distribution entities; skilled at directing, planning and implementing approach and objectives for client's project; experienced in engineering and operations management, process improvement, project management, construction, business development, marketing, continuous improvement, strategic alliances, labor relations, strategic planning, change management, organization assessments and regulatory compliance. Consulting expertise supports both management and technical projects, with assignments grouped in the following categories: Management Audits, Merger Due Diligence, Safety and Reliability Reviews, Emergency Response, Integrity Management, Benchmarking, Operational Assessments and Various Studies.

Selected Consulting Assignments:

Peak Day Planning Assessment of Dominion Energy Utah (2017 – present) Utah Division of Public Utilities

This assignment entails assessing the engineering, planning and operations issues associated with maintaining an adequate gas supply. DEU has testified that under design day conditions demand exceeds the average hourly nomination and results in the inability to meet customer requirements without a peak hour supply service. My role is to analyze of the various filings with the goal of assisting the Division in arriving at a conclusion regarding proper peak day planning needs and associated transportation contracts.

Management and Operations Audit of New York State Electric & Gas and Rochester Electric & Gas Companies (2017-present) New York State Public Service Commission

The focus of this audit is to enhance the utility's future performance by observing its existing processes, practices systems and organizational structures and determining how they can improve. My specific areas of concentration are gas planning, forecasting, supply and operations.

Operational Due Diligence Consulting AltaGas Ltd. - WGL Holdings Merger (2017) Maryland Public Service Commission

Analyzed and testified as to the potential impacts on WGL Holdings operating utility, Washington Gaslight in Maryland. My role was to assist the MDPSC Staff in determining if the transaction was in the public interest by assessing how it could affect the reliability, adequacy and safety of gas service in Maryland. Specific support activities included: analysis of pre-filed materials, participate in discovery, provide expert analysis, provide expert testimony, develop cross examination, assist in brief preparation, and support settlement discussions.

Management and Operations Audit of Central Hudson Gas & Electric Corporation (2016-2017) New York State Public Service Commission

The focus of this audit is to enhance the utility's future performance by observing its existing processes, practices systems and organizational structures and determining how they can improve. My specific areas of concentration are gas planning, project management and work management.

Energy Service Charge and Stranded Costs Review of Eversource (2016- 2017) New Hampshire Public Utilities Commission

Review analyze and testify to the revenue and expense reconciliation of the default Energy Service for PSNH's fossil and hydro generating assets for 2015. The scope of work includes: understanding the cause and duration of outages and recommending any disallowances or operational changes assessing purchases and sales of replacement power and analyzing a costly dispatch event.

Management Audit of United illuminating (2015-2016) Connecticut Public Utility Regulatory Authority

Serving as Jacobs' responsible officer and project manager we conducted a comprehensive diagnostic review the major functions of UI. The scope of the audit included: organization and management, financial systems and controls, marketing, engineering and operations, information technology, customer-service operations, and relationships with parent company.

Gas Infrastructure Filing - Public Service Electric and Gas Company (2015)

PSE&G wanted to initiate a gas infrastructure filing to replace approximately 4,000 miles of cast iron and bare steel, while recovering all associated costs in a timely manner. To address requirements for a comprehensive filing, Jacobs analyze and developed: a Safety case, a Business case and a Program execution plan. The analysis resulted in direct testimony that was filed with the NJ BPU.

Operational Due Diligence Consulting Exelon - Pepco Holdings Incorporated Merger (2015) Maryland Public Service Commission and Delaware Public Service Commission

Analyzed and testified as to the potential impacts on Pepco Holdings' two operating utilities in Maryland and Delaware. Jacobs' role was to assist the MDPSC) and DEPSC Staff in determining if the transaction was in the public interest by assessing how it could affect the reliability, adequacy and safety of electric service in Maryland and gas and electric service in Delaware. Specific support activities included: analysis of pre-filed materials, participate in discovery, provide expert analysis, provide expert testimony, develop cross examination, assist in brief preparation, and support settlement discussions.

Electric Reliability Reporting Metrics of the New York State Electric Utilities (2014-2015) New York State Public Service Commission

The objective of the audit was to verify that the data provided by the six major New York State electric utilities to the NYSPSC is sound and accurate, and reflects the appropriate levels of reliability. Serving as project manager, we reviewed the completeness and accuracy of data collected by various systems, identified opportunities for improvements and recommend best practices metrics.

Public Service New Hampshire Clean Air Project at Merrimack Station (2010 – 2014) New Hampshire Public Utilities Commission

PSNH was installing a wet scrubber at Merrimack Power Generating Station, originally the project was estimated to cost \$250M, at the time Jacobs was assigned to the project the cost estimate had increased to \$457M. Acting as both responsible officer and project manager, our scope of work included: due diligence on completed portions of the project, monitoring of the ongoing portion of the project, quarterly reports to track the progress and summarization of project completion. The project due diligence was summarized in testimony and presented at a New Hampshire Commission cost of service hearing.

Comprehensive Review of UGI's Penn Natural Gas, Inc Gas Program and Activities (2014)

UGI Corporation

Conducted a comprehensive review of UGI PNG's Natural Gas Distribution programs and activities based on their operating policies, processes, standards, procedures, systems, records, culture, staffing levels, and training programs. Serving as responsible officer, specific areas of focus were organizational silos, decision-making, knowledge sharing in the areas of leak management, corrosion management, transmission integrity management, and emergency response.

Technical Due Diligence Power Generation Assets (2013) Elliott Management Corp.

Elliott was interested in acquiring fossil and renewable power generation assets located in Latin America. Serving as responsible officer and project manager, Jacobs performed a technical, organizational, environmental, and power market assessment. In addition, we provided assumptions for Elliott's cash flow spreadsheet and develop a Dispatch/Market Analysis Model.

Operational Risk Management Assessments (2013 to 2014) Enbridge Pipeline Inc.

Enbridge wanted to determine ongoing conformance with project management systems and to identify current good practices and improvement opportunities to achieve industry leadership in pipeline construction. Serving as project manager, Jacobs conducted a number of Operational Risk Management Assessments for both pipelines and major facility construction that focused on organizational design, delegations of authority, and knowledge sharing within the 2000-person field organization structure.

Assessment of Safety Policies and Emergency Response Procedures (2013) NiSource

In response to a gas related incident, NiSource sought an independent review of its safety policies and emergency response procedures. Included in the projects scope of work was a review of the pertinent policies, processes and procedures; identification of opportunities for improvement; and development of roadmap for how these opportunities should be prioritized for implementation. Serving as project manager, our analysis involved assessing policies, practices and procedures in the categories of emergency response, facility damage prevention, and leak management and leak investigation. In each category, unclear decision-making, communication barriers, poor organization structure were contributing factors.

Transmission and Growth Strategy Assignments (2012 to 2015) Central Alberta Rural Electric

Serving as responsible officer, Jacobs performed the following assignments:

- Operational Capabilities Report to support right to serve all new customers within its territory.
- Transmission Report to support having costs allocated directly for existing transmission lines.
- Load Settlement Report to determine the feasibility of taking over the existing lines.
- Independent Operating Agreement with Fortis.
- Fortis-AB Rate Case Phase 2 Assistance for CAREA as merged with North Parkland.

Investigation into the Performance of Connecticut's Electric and Gas Distribution Companies in Restoring Service Following Storm Sandy (2013) Connecticut Public Utilities Regulatory Authority

Serving as responsible officer, Jacobs provided technical expertise to PURA's staff in areas pertaining to electric distribution company and gas company preparation for and action in response to significant outages that occurred as a result to Hurricane Sandy.

Responding to the Requirements of Public Act No. 12-148, An Act Enhancing Emergency Preparedness and Response (2012) Connecticut Public Utilities Regulatory Authority

In the aftermath of Tropical Storm Irene and the October 2011 Snow Storm, Connecticut recognized the need to enhance emergency preparedness and response and establish electric and gas company performance standards for emergency preparation and service restoration. Acting as project manager, Jacobs facilitated an interactive process with five utilities, Rate Council and Commission Staff.

Assessment of Pacific Gas & Electric Co. Pipeline Safety Enhancement Plan (2011-2012) CPUC

The PSEP is a multiphase, multiyear, multibillion dollar program that is in addition to PG&E's existing transmission pipeline maintenance and integrity management programs. Jacobs was asked by the CPUC to review the PSEP, supporting work papers and testimony filed by PG&E, as well as interveners.

Technical Analysis of the New Jersey Natural Gas Company's Safety Acceleration Facility Enhancement Program (2012) New Jersey Division of Rate Counsel

Working as project manager, Jacobs performed an assessment of NJNG proposal to undertake a five-year \$204 million capital investment program for the replacement of existing cast iron and unprotected steel distribution mains and services; and achieve cost recovery through annual rate adjustment filings.

Management Audit of Public Service Electric and Gas Company (2010-2011) NJBPU

Jacobs Consultancy participated in an independent management audit of PSE&G mandated by The State of New Jersey's Board of Public Utilities (BPU). Serving as Jacobs' project manager, the technical and management practices of PSE&G were assessed in the areas of electric transmission and distribution, gas transmission and distribution, gas procurement and supply and contractor performance.

Energy Reliability Consulting Exelon - Constellation Energy Merger (2011) Maryland PSC

Analyzed the potential impacts on BGE in connection with the Exelon and Constellation Energy Merger; my role was to assist the Maryland Public Service Commission's (MDPSC's) Staff in determining if the transaction was in the public interest by assessing how it could affect the reliability, adequacy and safety of electric and gas service in the State of Maryland.

Assessment Study of Project Execution of Major Gas Pipeline Project (2011) Spectra Energy

Performed a Critical Assessment study of project execution for the New Jersey-New York Pipeline Expansion Project. As project manager coordinated a review the risk mitigation areas already recognized, and identified additional issues that may arise, which could impede permitting and construction of the Project. In total, 13-risk mitigation areas and strategies already recognized were expanded, six additional risk mitigation issues were identified, and four additional project management tools were suggested.

Report of the Independent Review Panel, San Bruno Explosion (2010-2011) CPUC

Jacobs was retained by the Independent Review Panel to gather and review facts and suggest recommendations for the improvement and safe management of PG&E's natural gas transmission lines. Serving as project manager our investigation identified multiple weaknesses in PG&E's management and oversight, as well as in the CPUC's resources and organizational focus.

Management Audit of Fitchburg Gas and Light Company d/b/a Unitil (2010-2011) Massachusetts Department of Public Utilities

Jacobs Consultancy was asked to conduct an independent management audit of FG&E. Serving as engagement director and project manager, the management practices of both FG&E and Unitil were assessed in the areas of strategic planning, staffing and workforce management, management and control, customer and public relations and emergency preparedness and response planning.

Operations and Energy Reliability Consulting in Connection with the merger of First Energy Corp. and Allegheny Energy, Inc. (2010) Maryland Public Service Commission

Analyzed from a reliability and operations perspective the problem areas, deficiencies, and merits of the proposed acquisition of AYE by FE. My role was to serve as the Maryland Public Service Commission's expert electric witness testifying as to the potential impact on AYE's Potomac Edison reliability and safety in a post-merger environment.

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Service Response and Communications of CL&P and UI following the Outages from the Severe Weather (2010) Connecticut Department of Public Utility Control

The scope of this assignment entailed: analysis of pre-filed testimony, preparation of discovery requests, auditing CL&P's and UI's procedures, examination of the evidence, cross-examination at public hearings and providing the DPUC with a report containing. Serving as project manager, Jacobs conducted its investigation in seven focus areas: Emergency Planning, Preparedness, Restoration Performance, Mutual Assistance, Post-storm Activities, Best Practices and Other.

Energy Reliability Consulting in Connection with the Electricité de France Purchase of Constellation Energy Group's Nuclear Holdings (2009) MD PSC

Analyzed the potential impacts on BGE in connection with Electricité de France's proposed purchase of half of Constellation Energy Group's Nuclear Holdings. Serving as the MDPSC's expert electric and gas witness, I testified to: overall electric reliability performance, effectiveness of the vegetation management program and other maintenance and inspection programs, adequacy of funding for capital asset replacement and operations & maintenance needs, need for contemplated cast-iron replacement program, need to re-examine service replacement policy and assessment of customer satisfaction surveys.

Workforce Study Analysis of Illinois Electric Utilities (2008) Illinois Commerce Commission

The Illinois Commerce Commission retained Jacobs Consultancy to conduct a workforce study analysis of the five major Illinois electric utilities. The intent of the analysis was to determine the adequacy of in-house staffing in each job critical to maintaining quality reliability and restoring service. The study also included: assessment of asset management practices, use of technology, operational practices, system maintenance and condition, call center, safety and training.

Technical Evaluation of New Connecticut Peaking Generation Units (2008) Connecticut DPUC

Coordinated a technical evaluation and review of 11 proposals to build 500 MW of new peaking generation units in the state of Connecticut. Our work included: land site costs, insurance, capital costs, operating costs, starting capacities, type of fuel, proximity and availability of electric and gas connections, inclusion of Nox controls, heat rate, permit schedule, and other critical path items.

Transmission Pipeline Project Management and Execution Process Assessment (2007-2008)

Spectra Energy

Performed an evaluation of Spectra's project management and project delivery processes. Assessment covered project conception through closeout with key recommendations made in the following areas: strategy, project development process, project estimates, project execution, culture, and supporting IT systems. In addition to the management evaluation, consulting support was provided for establishing the business development and quality processes as well as instituting enhanced approaches to project control and forecasting.

Energy Reliability Consulting Services in Connection with the Exelon-PSEG Proposed Merger (2005-2006) New Jersey Board of Public Utilities

Jacobs Consultancy completed 14-month engagement analyzing the problem areas, deficiencies, and merits of the proposed acquisition of PSEG by Exelon, with specific emphasis on how the proposed merger may affect New Jersey ratepayers.

Industry Assignments:

Operations-Responsible for the installation, operations and maintenance of the gas distribution system, managed workforces between 500 and 1000 employees.

Engineering-Managed the planning, budgeting, design, measurement and engineering support services.

Quality Management/Process Improvement-Designed, implemented and promoted quality and organizational activities including organization design, culture change, knowledge transfer, workforce staffing, communications and process improvement.

Technical Support and Regional Performance-Developed a technology and performance focus to improve performance, reduce costs and improve customer service

Designated Expert Witness:

- AltaGas Ltd. - WGL Holdings merger (Maryland Public Service Commission), 2017
- Eversource Energy, Service Charge and Stranded Costs Review (New Hampshire Public Utilities Commission), 2017
- Exelon-Pepco Holdings merger (Delaware Public Service Commission), 2015
- Exelon - Pepco Holdings merger (Maryland Public Service Commission), 2015
- New Hampshire Clean Air Project at Merrimack Station cost of service (New Hampshire Public Utilities Commission), 2014
- Exelon and Constellation Energy merger (Maryland Public Service Commission), 2011
- First Energy Corp. and Allegheny Energy, Inc. merger (Maryland Public Service Commission), 2010
- South Jersey Gas Company, Rockford Eclipse valve replacement cost of service (New Jersey Public Utilities Commission), 2010
- Electricité de France purchase of Constellation Energy Group's Nuclear Holdings (Maryland Public Service Commission), 2009
- Exelon and PSEG merger (New Jersey Public Utilities Commission), 2006

Employment History:

Williams Consulting Inc. (2016 – present) Partner/Principal

Jacobs Consultancy Inc. (2002 – 2016) *Director*

Stone & Webster Consultants (2000 – 2002) *Associate Director*

Mountaineer Gas Company (1996 – 2000) *Vice President of Operations and Engineering*

Public Service Electric & Gas Company (1968 – 1996) various senior management positions