Philip DiDomenico

Managing Consultant

SUMMARY

Mr. DiDomenico brings nearly 40 years of experience as an accomplished leader, management consultant and electrical engineer with extensive and diversified experience in electric utility management, planning, and operations. He provides strategic planning, organizational and decision-making advisory services to a wide range of clients in the electric power industry.

AREAS OF EXPERTISE

Strategy & Decision Making ♦ Organization & Operational Effectiveness ♦ Regulation & Policy

Strategy & Decision Making

Mr. DiDomenico has worked to clients to develop robust strategic planning processes. He has experience facilitating senior management discussions of major strategic issues. Building consensus as a means of resolving differences and driving performance.

Project Examples

- **New York Power Authority** - Developed and facilitated a strategic planning effort. Focused interviews were held with executive and senior management personnel in order to identify areas in need of strategic focus. The information gathered and documentation collected served as the basis for developing a structured strategic planning session. Strategic issues requiring discussion were identified and assigned to breakout teams for resolution. Played an integral role in not only identifying the key issues but also facilitating their discussion with the Executive Team.
- **Badger Licensing LLC -** Worked with senior management to facilitate a strategic planning process aimed at developing organizational and market strategy for this technology licensor. Initial stages of this process included developing a coordinated understanding of organizational differentiation, merged with insights into the evolving demands of their customer base. Senior management utilized Shaw Consultants' independent facilitation skills to focus and challenge the team, as well as document the process. The team conducted interviews as a means of highlighting key themes of concern to leadership, which were followed by facilitated group meetings with key stakeholders to improve upon the understanding of key issues, and the development of strategic direction and goals for future growth. Throughout the process, key insights were developed and have been utilized in shaping the strategic direction of the organization.

Organization & Operational Effectiveness

Mr. DiDomenico has worked with numerous clients on the subject of organizational and operational effectiveness. He has helped clients to improve the overall effectiveness and operational efficiency of their organizations. Mr. DiDomenico's skills in this area include an extensive knowledge of asset management related principles and their application to both Power Production and Power Delivery organizations. He has the ability to guide multi-disciplinary teams in the development of a higher

performing organization. In addition he has experience facilitating senior management discussions of major strategic issues. Building consensus as a means of resolving differences and driving performance.

Project Examples

- **Public Service of New Hampshire** - Reviewed distribution planning processes, system reliability, and performed a general system condition assessment. Identified several changes in processes, information systems, management reporting, and documentation that would serve to improve the reliability and system planning. Final report was presented to the Commission.
- **Vermont Electric Cooperative** - Worked with the CEO and Board of Directors in concert with the Vermont Department of Public Service to perform a Business Process Review of the Transmission and Distribution Cooperative. This effort involved a review of the entire organization including Board activities to assess the organization's structure, effectiveness and execution. Recommendations for improvement were extensive impacting capital investment and strategic direction.
- **Southwestern Louisiana Electric Membership Cooperative -** Interviewed the CEO, key managers, and reviewed detailed documentation. Assessed the effectiveness and efficiency of management and business operations. Evaluated the risks associated with anticipated succession issues. Recommendations included a realignment of responsibilities, hiring personnel for several positions, a shift in organizational focus, revised reporting, and new training and mentoring plans.
- **Hoosier Energy Cooperative –** Performed an organizational effectiveness and business process review of the Power Delivery and Power Supply organizations. This process involved a series of interviews with senior executives, managers and staff, relevant document and information reviews, several process review teams composed of Company staff and consulting team members performed an extensive analysis of industry trends to provide recommendations for changes and improvements to the organization, staffing, planning, business processes, and system applications.
- **Confidential Client -** Provided a targeted business process review of the key marketing and proposal development practices of the organization to better align organizational achievement and practices with management expectations and market demands. Facilitated executive-level discussions with a cross-section of organizational groups to investigate barriers to success. Recommended several areas for immediate improvement and documented action items to be addressed.
- **E.ON US –** Assessed the management and operations practices at a number of their generating facilities. Advised senior executives (i.e. engineering operations, planning, and financial management) with respect to areas of best practice along with areas needing improvement. The effort involved facility inspections and staff interviews to assess operations and planning functions.
- **East Kentucky Power Cooperative -** Assessed the effectiveness of the organization’s structure, alignment and performance. A functional and core process review was performed in order to analyze the as-is processes, policies, and procedures and how these subsequently hinder, impact, or strengthen desired levels of efficiency and effectiveness. Specific recommendations were developed for improving performance, organization structure, functional activities, core processes and staffing levels.
- **Nova Scotia Power Company -** Worked with the Senior Management of Nova Scotia Power Company to provide advice and counsel relative to their ability to achieve productivity gains and efficiencies in the management and operations of their generation facilities.
- **Public Service Commission of the District of Columbia Review of Electric Utility Undergrounding Policies and Practices -** conducted an unbiased analysis and assessment of the feasibility and reliability issues related to undergrounding the distribution system. The Study’s objectives included:

- A comprehensive review and analysis of previous undergrounding studies including studies and analyses performed by Pepco.
- Development of the cost, feasibility, and reliability implications of select undergrounding alternatives to the existing overhead distribution system.
- Examining the potential impacts of undergrounding projects on the environment, residents, infrastructure, and health and safety.

As part of that process, key government agency and public interest stakeholders were invited to briefings on the findings and recommendations of the study. These briefings were used to gather stakeholder input in the development of a future District-wide undergrounding policy.

- **Long Island Power Authority –** Reviewed the electrical utilities undergrounding policies and practices. Evaluated the pros and cons of underground versus overhead circuit construction. Several utilities, communities, and governmental agencies were researched in order to gain a broad understanding of the issues involved. Key insights were identified. The focus of the evaluations centered on a combination of factors including; system reliability, public safety, aesthetics and economics.
- **Long Island Power Authority -** Reviewed T&D construction practices and their impact on public safety. Reviewed trends in electrical contact cases on Long Island and identified the public safety implications of alternative T&D construction practices. These alternative practices were compared and contrasted in categories that included; construction cost, environmental impact, reliability impact, and their likely effectiveness in reducing injuries from accidental electrical contact.

Asset Transaction Services

Directed a number of merchant generating unit and T&D asset assessments for use by financial due diligence teams and developers. Multiple energy markets are modeled to assess and forecast the market price of power and the competitive positioning of units or portfolios in each market. This complex modeling considers a myriad of relevant market factors such as interconnection issues, market rules, customer choice levels, fuel price characteristics, and the operational aspects of the assets in question.

Project Examples

- **Devens Electric System -** Retained by the Massachusetts Development Finance Agency in connection with the proposed issuance of $10.4 million in Electric System Revenue Bonds for the purpose of financing improvements and additions to the electric system at the Devens Commerce Center. Conducted an onsite inspection of the transmission and distribution (T&D) system and authored the T&D system condition assessment portion of the Independent Consultant's Report.
- **Long Island Power Authority (LIPA) Acquisition of Long Island Lighting Company T&D Assets -** Led the consulting effort to support the negotiation and implementation of a management services agreement with KeySpan Energy to operate and maintain LIPA's T&D facilities. The agreement was a key component of a comprehensive restructuring plan under which LIPA acquired the former Long Island Lighting Company's transmission and distribution assets as a means of lowering electric rates on Long Island. As LIPA's representative, identified assets to be transferred, evaluated the overall condition of T&D facilities, negotiated capital and O&M budgets, established capital project justification guidelines and the criteria for LIPA's review of major capital projects and scheduled maintenance deferral, determined criteria for defining "major storm" events, and reviewed procurement practices.
- **Western Resources T&D Asset Valuation –** Supported the determination of the value of the T&D system in preparation for a potential municipalization action. The Replacement Cost New value was determined based on a combination of cost trending, construction costs and field observations.

- **Long Island Power Authority T&D Facilities Condition Assessment in Support of Bond Financing -** Developed a T&D facilities condition assessment in support of a $200 million bond offering. Onsite inspections were performed on a representative of sample of T&D facilities. Maintenance records were also reviewed for selected major pieces of equipment.
- **Long Island Power Authority Generation Acquisition -** Evaluated the strategic value of acquiring 4000 megawatts of generating assets on Long Island. Issues evaluated included; economics under varying purchase prices, potential for operations and maintenance related savings, opportunities for reduced staffing, economics of alternative financing proposals as well as market power related concerns and the likely implications for stimulating a competitive market on Long Island.
- **Confidential Client: Power and Renewable Energy Market Assessment to Support Potential Acquisition**—Performed a market advisory assessment to support a client's investigation into potential acquisition of several biomass-fueled generation resources in the New England and California power markets. Provided insight into the U.S. power industry, including specifically, the wholesale power markets and Renewable Energy Credits (RECs) markets for both of these regions, as well as the related fuel supply markets in New Hampshire and California for wood-waste biomass. Market price projections were developed to support the anticipated revenues from the output of each of the three facilities, including a review of the industry market outlooks for wholesale power, ancillary services, and for RECs. This assessment incorporated an outlook on carbon prices and the carbon initiative that were under development in the U.S.; also identified potential risk implications for each of the three facilities, based on the U.S. market trends and the future of REC markets.

Integrated Resource Planning

Project Examples

- **Guam Public Utilities Commission – Resource Planning Review and Reliability Assessment -**

  Reviewed the multi-year major construction plan of the Guam Power Authority to assess their approach to planning, prioritization, budgeting, and timing of capital projects relative to anticipated need for system investment for generation, transmission, and distribution system. The review recommended an updated approach to the prioritization and a more detailed presentation of budgeting and project management by the Power Authority to the Commission.

  Also reviewed the Power Authority's Integrated Resource Plan on behalf of the Commission. The review recommended a need for additional information and investigative steps prior to investment in new capacity sources and an expansion of the technologies considered to address a goal of increased resource diversity. Our team also recommended an investigation of the DSM planning, a move toward more renewable resources, and an assessment of Island reliability.

  The reliability review looked at the current metrics relative to reliability, root cause analyses, reporting and communication of outages to all stakeholders and is in review by the Commission in preparation for an Order to GPA for enhancements.

- **Long Island Power Authority Electric Resource Plan (ERP) Development** - Working in conjunction with the Authority's staff, supported the development of a multi-faceted ERP to meet the energy needs of Long Island. The plan provides a comprehensive and flexible approach to providing a safe, reliable, environmentally friendly and cost efficient supply of electricity to customers well into the future. This is accomplished by investing in customer programs, energy efficiency, conservation, new technologies, encouraging development of merchant transmission and generation, adding off-island transmission interconnection capability, enhancing existing power supply resources and evaluating the need to build additional ones. The ERP includes programs for energy efficiency and renewable resources.

- **Long Island Power Authority Resource Planning Process -** Developed a unique approach to managing the risk inherent in resource planning. The probabilistic Decision Analysis based approach allows decision makers the ability to clearly understand the uncertainties in the planning process and the implications of planning to meet varying levels of uncertainty.
- **Consumers Energy Company Long-term Resource Plan -** Worked with the Senior Management Team to develop an integrated resource plan. Reviewed and recommended options for the core energy issues affecting resource availability and planning. Topics investigated included the use of energy efficiency, load management and demand response programs, the appropriate technologies for short and long term resource needs, the impact of MISO market operations on planning for the energy future, the potential for price volatility and availability issues in fuel markets, the treatment of fuel markets in strategic planning, and transmission constraints and expansion planning. Our team developed a broad set of efficiency programs for potential adoption.
- **MIT Utility Master Plan -** Established a long term plan for MIT's utility infrastructure to support the continued operation and expansion of the Cambridge campus facilities. The plan benchmarked existing utilities and provided a firm plan for improvements needed over the next five years with a projection of the improvements that may be needed in years six through ten. The plan also provided a framework for annual updating in support of an ongoing five year planning horizon. While the plan is based on future development scenarios for the complete build out of the campus, it also provides guidance for incorporating changes in development priorities in the decision making process. A dynamic model was created capable of providing feedback on the impacts that individual building projects would have on the campus system so that utility supply decisions can be made within a broad context.

Electric Utility Management

Leadership Examples

- **Management of Electric Delivery System -** Played a key role in restructuring and realigning Boston Edison Company's electric distribution operations to reduce costs, improve customer service, and position the company for competition.
    - Directed all facets of the business group's $80-million capital budget, supervised staff of 28 engineers, and developed and implemented competitive business and operational strategies.
    - Facilitated the transition from a traditional engineering based operation to one structured along process lines.
    - Planned and directed a comprehensive, strategic assessment of the present and future needs of the electric delivery system as a guide for infrastructure planning and development.
    - Implemented a reliability-centered maintenance initiative, leading the way to a 40 percent cost reduction and an increase in the effectiveness of the distribution system’s maintenance program. Also, developed criteria for performance-based ratemaking.
- **Management of Engineering Services -** Developed and implemented business and operational strategies to support the successful operation of the Company’s fossil generating units.
    - Directed all facets of the business unit's $30-million capital budget.
    - Achieved a $6-million inventory reduction, far exceeding company goals, by devising highly effective planning and control procedures.
    - Facilitated development of the Production Engineering Planning System, an IT application that significantly improved budget accountability and control.
- **Power Supply Planning and Management -** Prepared analyses of alternative operating strategies and emerging generation technologies for strategic evaluation. Planned and mobilized the Power Supply

Group's initial business and strategic operating plan, which focused the organization's direction and ensured consistency with overall corporate objectives. Managed the group's $60-million capital budget establishing processes that led to excellence in budget performance and the optimal use of resources.

- **Fossil Power Plant Performance Improvement -** Developed innovative approaches for improving the operating efficiency of and capital planning criteria for the company's fossil generating units. Developed a new program for monitoring and evaluating the condition of turbine lube oil. Created, analyzed and monitored fossil unit performance goals as a means of predicting operating problems in advance of outages. Extended the time between major turbine overhauls. As the primary witness before the Massachusetts Department of Public Utilities, prepared and offered testimony regarding fossil unit performance. Through effective presentation of events and their underlying causes, incurred zero penalties for replacement power costs for an unprecedented three consecutive years.
- **Resource Planning and Management -** Performed and directed production cost and financial analyses to evaluate capital investments and identified power purchase and sales opportunities for Boston Edison Company. Created a unique approach using decision analysis techniques to manage the risks inherent in energy supply planning and capital investment decisions associated with power plants.
- **Underground Distribution Engineering and Construction -** Developed construction standards, prepared specifications, and evaluated materials and equipment for Baltimore Gas & Electric Company's underground distribution system. Also responsible for correcting unusual outage and engineering problems related to duplicate 34.5 kV supply to industrial customers and 13 kV supply to large residential subdivisions.

EMPLOYMENT HISTORY

Daymark Energy Advisors Inc. *(formerly La Capra Associates)* — Boston, MA
Managing Consultant — May 2015 – Present

Lummus *(formerly Shaw)* **Consultants International** — Canton, MA
Senior Principal Consultant, Management Consulting — 2002 – April 2015

Navigant Consulting — Burlington, MA
Director, T&D Management Services — 1997 – 2002

Boston Edison Company *(currently Eversource)* — Boston, MA
Manager, Electric Delivery — 1995 – 1997
Manager, Engineering Services — 1993 – 1995
Executive Assistant to Senior Vice President, Power Supply — 1991 – 1993
Performance & Reliability Coordinator, Production Operations — 1988 – 1991
Senior Electrical Engineer, Resource Planning — 1980 – 1988

Baltimore Gas & Electric *(Constellation Energy Group)* — Baltimore, MD
Electrical Engineer, Distribution Engineering and Construction — 1976 – 1980

EDUCATION

Loyola College — Baltimore, MD
M.B.A., Management — 1979

University of Massachusetts — Boston, MA
B.S., Electrical Engineering (Power Systems) — 1976

GROUPS AND ASSOCIATIONS

Association of Edison Illuminating Companies

Electric Power Apparatus Committee	1996-1997
Power Generation Committee, Distributed Resources Subcommittee	1994-1995

New England Power Pool

Unit Availability Task Force	1989-1992
Generation Task Force	1986-1988

PUBLICATIONS, PRESENTATIONS & CONFERENCES

Publication

"Guidelines for Capital Investment Analysis - Fossil Stations." Prepared for Boston Edison Company

Conference Presentations

- *"An Apples to Apples Survey of Utility Measurement." American Public Power Association, Engineering & Operations Workshop Proceedings*
- *"Plant Performance Optimization Using Cost-Benefit Decision Analysis Techniques." Inter-RAM Conference* Proceedings

EXPERT TESTIMONY

Forum	**On Behalf of:**	**Topic**
Newfoundland Board of Commissioners of Public Utilities	Newfoundland and Labrador Hydro	Prudence Review of Selected Unit Outages as part of the 2013 Amended General Rate Application.
Massachusetts Department of Public Utilities	Massachusetts Attorney General's Office	Prudence review of the capital spending related to the electric T&D system. Fitchburg 2015 Electric Rate Case.
Massachusetts Department of Public Utilities	Boston Edison Company	Prudence of the operating performance of the Company's fossil generating fleet over a three year period from 1988 to 1991.
Massachusetts Electric Facilities Siting Council	Boston Edison Company	Innovative approach to balancing risk in the development of resource plans using decision analysis techniques.

Dan Koehler

Consultant

Dan Koehler is a Consultant at Daymark Energy Advisors. He assists clients with research, analysis and decision-making support in a wide range of areas including resource planning and procurement, ratemaking and regulation, and asset valuation. Mr. Koehler is an integral part of the firm's Market Analytics team responsible for maintaining and running Daymark's wholesale electricity market model and other forecasting tools. He has provided expert testimony in front of public utilities commissions on resource planning and ratemaking issues. Mr. Koehler holds a Master's Degree in Public Policy & Management from the University of Southern Maine and a B.A. in Applied Mathematics with a focus on Economics from Yale University.

SELECTED PROFESSIONAL EXPERIENCE

Utility Planning

- Analyzed a request to the North Dakota Public Service Commission for an Advanced Determination of Prudence for installation of $500 million Air Quality Control System at Big Stone coal-fired power facility. Assisted Richard Hahn with developing expert testimony on behalf of NDPSC Staff in Docket No. PU-11-165.
- Analyzed a petition to the Arkansas Public Service Commission for approval of installing $500 million in environmental controls at Flint Creek coal-fired power plant in northwest Arkansas. Assisted Richard Hahn with developing expert testimony on behalf of APSC Staff in Docket No. 12-008-U.
- Evaluated the Integrated Resource Plan of a North Dakota utility and helped prepare expert testimony before the Public Service Commission on the utility's application to build a new generation unit.
- Evaluated application filings and drafted testimony for presentation to the Wisconsin Public Service Commission on a proposed 345kV transmission project and a quarter billion dollar distribution system upgrade.
- Assisted with developing and drafting Integrated Resource Plans for two Vermont utilities, including producing a multivariate regression analysis to forecast load.
- Monitors new and developing environmental regulations affecting electric generating units – particularly the Cross-State Air Pollution Rule (CSAPR), Regional Haze Rule, Mercury and Air Toxics Standards (MATS), and greenhouse gas standards – and has provided consultation to clients on potential impacts.
- Analyzed the application of a Utah utility for approval of a new 625 MW combined cycle generation resource, and assisted with expert testimony of Richard Hahn on behalf of the Division of Public Utilities in Utah PSC Docket No. 10-035-126.
- Provided analysis of climate change impacts and potential renewable energy export markets for independent consultant work on the Manitoba Hydro application to construct over 2,000 MW of new hydro facilities

Rates and Regulation

- Provided expert pre-filed and oral testimony to the Michigan Public Service Commission in Consumers Energy Company's general electric rate case (Case No. U-17735) focusing on generation investment decisions.
- Managed the project team assisting Kaua'i Island Utility Cooperative (KIUC) with re-design of rates, with a focus on addressing issues related to widespread installation of distributed energy resources.
- Assisted the Utah Division of Public Utilities in a review of Rocky Mountain Power's net power cost reconciliation ("Energy Balancing Account") for each year since 2011, with particular focus on the prudence of natural gas and electric hedging transactions. Filed expert report and testimony in Docket No. 15-035-03 auditing 2014 EBA costs.
- Conducted market research and designed Time of Use, Critical Peak Pricing and Real Time Pricing rates for multiple small New England municipal utilities.
- Assisted the Utah Division of Public Utilities with the analysis of capital expenditures in a major utility's general rate case, including a novel sampling approach to generalize findings, and assisted with preparation of expert testimony.
- Designed Allocated Cost of Service-based Critical Peak Pricing Rates for Stowe Electric Department and drafted supporting testimony to the Vermont Public Service Board.
- Worked with a team to develop testimony in several electric rate cases on behalf of the Wisconsin Citizens Utility Board.

Market Analytics

- Maintains and runs Daymark's AURORAxmp Electric Market Model, which is used to support analysis for numerous client projects. These duties include monitoring and updating New England and New York demand forecasts, generation additions and retirements, and fuel price forecasts; as well as reviewing and benchmarking model outputs and preparing reports summarizing results.
- Developed process improvement strategies in wholesale electricity market modeling for a large Canadian independent power producer. In particular, assisted the client in improving the representation of NYISO in AURORAxmp, with a focus on improved output benchmarking tools, supply stack representation and fuel forecasts. Also assisted the client with programming AURORAxmp to conduct Monte Carlo risk analysis with multiple correlated continuous and discrete risk variables.
- Developed a model of the Southern Company and neighboring Balancing Authority Areas using AURORAxmp software.

Generation Asset Valuation

- Assisted with the preparation of an appraisal critique and alternative asset valuations for a 540 MW natural gas-fired generation unit in Rhode Island and several hydroelectric assets in Northern New England. Supported expert witness Dan Peaco in multiple ongoing tax appeal litigation proceedings in Vermont, New Hampshire and Rhode Island courts.
- Provided analysis, expert witness preparation, and litigation support in two arbitration cases concerning fair market value of hydroelectric generation assets in Maine and Vermont. Assisted expert witness Dan Peaco with testimony in arbitration proceedings regarding the valuation of 4 MW Brassua

Dam in Maine (AAA Case No. 11 153 Y 02133 11) and the valuation of 7 MW Winooski One in Vermont (AAA Case No. 11 198 Y 002014 12).

- Co-authored a report with the New Hampshire Public Utilities Commission Staff on the market value of Public Service Company of New Hampshire's generation fleet.

Other

- Participated on a team that modeled, analyzed and prepared a report on the current and potential impact of a Renewable Energy and Energy Efficiency Portfolio Standard in North Carolina.
- Manages database for existing and proposed New England and New York renewable energy projects in support of REC market analytics and price forecasting.
- Analyzed the merger application of Duke and Progress, and assisted with drafting testimony on behalf of environmental organizations in North Carolina and South Carolina Commission proceedings.
- Research and analytical support for Central Procurement Options study for Massachusetts DOER and Attorney General's Office.
- Provided research and market analytics support for expert witness testimony on the potential for Hydro Quebec to export wind power to New England markets.
- Analyzed PJM's proposed capacity market overhaul and assisted a large coalition of stakeholders with intervention at the FERC regarding the transition process.

EMPLOYMENT HISTORY

Daymark Energy Advisors, Inc. — Boston, MA
Consultant — 2013 – Present
Analyst — 2010 – 2013

Kennebec Valley Organization — Waterville, ME
Director — 2003 – 2009

United States Peace Corps — Paraguay
Volunteer — 2000 – 2002

EDUCATION

University of Southern Maine — Portland, ME
Master of Public Policy and Management — 2011

Yale University — New Haven, CT
B.A., with Major in Applied Mathematics — 2000

PRESENTATIONS

- *Regulation, Markets and Headwinds for Coal Generation*, presented at the La Capra Associates Client Symposium, Burlington, VT, November 2012.
- *Incorporating Discrete Scenario Inputs in AURORA Monte Carlo Analysis*, presented at the EPIS Electric Market Forecasting Conference, Tucson, AZ, October 2013.

EXPERT TESTIMONY

Forum	**On Behalf of:**	**Topic**
Michigan Public Service Commission (Docket No. U-17735)	Michigan Environmental Defense Council and Natural Resources Defense Council	Expert testimony in Consumers Energy general rate case focusing on proposed investment recovery mechanism and generation asset disposition. June 2015.
Utah Public Service Commission (Docket No. 15-035-03)	Division of Public Utilities	Joint testimony sponsoring an audit report of Rocky Mountain Power's Energy Balancing Account.
New Hampshire Public Utilities Commission	PUC Staff	Valuation of PSNH generation assets.