



## Education

Bachelor of Science  
Chemical Engineering  
University of Notre Dame

Master of Engineering  
Environmental Engineering  
Stevens Institute of Technology

## Mark Mirabito Chief Operating Officer

As COO at NTE Energy, Mark is responsible for managing all development and corporate activities, as well as facilitating NTE's strategic industry relationships, ensuring efficient utilization of internal staff, and supporting the finance, business development and human resource teams.

Mark is overseeing development of the Killingly Energy Center, NTE's proposed 550 MW natural gas-fired generating facility located in Killingly, Connecticut. Mark is responsible for all aspects of the development, working closely with NTE staff and external consultants to ensure the project is completed in a diligent and judicious manner, within the appropriate regulatory framework.

Mark previously worked for Tamarack Energy, where he managed numerous renewable energy development projects in the Northeast including wind, biodiesel and biomass projects. Mark was the lead project developer for Watertown Renewable Power, doing initial development activities through its sale to Energy Investors Funds. He founded Revolve Power, LLC in 2009 to provide continuing development services to WRP and other renewable energy projects. Prior to joining Tamarack Energy, Mark held various engineering and project management positions at Merck & Co., Inc.

Mark received a BS in Chemical Engineering from the University of Notre Dame and a ME in Environmental Engineering from Stevens Institute of Technology.

## Prior Professional Experience

### **Revolve Power, LLC** – Norwalk, CT – 2009 to 2010

*Principal* – Established a self-owned, renewable energy development services company. Provided continuing project management support to WRP after its sale to Energy Investors Funds. Provided development services, including pro-forma development, site diligence, and power purchase agreement proposal preparation to an anaerobic digestion company. Provided development services, including incentives evaluation, emissions and permitting assessment, and proposal preparation for an industrial combined heat and power application.

### **Watertown Renewable Power, LLC** – Essex, CT – 2007 to 2010

*Project Manager* – Directed all project development activities for a proposed 30 megawatt biomass power facility in Watertown, Connecticut with an anticipated capital cost of \$150 million. Facilitated all permitting efforts, including application preparation and associated public meetings. Led all public outreach efforts, including preparation of a community consultation document, meetings with community officials, media interaction, presentations to community groups and negotiation of a water and sewer services agreement.

Facilitated execution of numerous site-specific fuel studies to confirm the availability of a sufficient, sustainable volume of biomass materials at a viable price. Directed preliminary engineering efforts, including site plan layout, minimum design criteria, major equipment quotes and construction cost estimates. Led the transmission interconnection process, including initial queue application, system studies, forward capacity market participation and interconnection agreement negotiation. Led solicitation, bid package preparation and bid evaluation efforts for engineering, procurement and construction services.

Led the project sale process, including the solicitation of potential buyers through expressions of interest, production and distribution of a confidential information memorandum, execution of a management presentation and due diligence package



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management. Facilitated transfer of project ownership from Tamarack Energy to Energy.

Investors Funds, a private equity fund manager. Pursued modification of the power purchase agreement into a more financeable form through legislative lobbying, stakeholder engagement and administrative procedures.

## **Tamarack Energy, Inc.** – Essex, CT – 2006 to 2009

*Project Developer* – Developed and drafted numerous business plans during Tamarack Energy's evolution from multi-technology distributed generation provider to utility-scale biomass power developer. Supported development of detailed financial models for the evaluation of optimum project size, sensitivity analysis and financial viability of potential development projects. Prepared incentive applications for the Connecticut Clean Energy Fund, the Massachusetts Technology Collaborative and the Department of Energy Loan Guarantee Program. Developed a multi-technology, distributed generation proposal for a large, mixed-use brownfield development in New Jersey through the evaluation of anticipated energy consumption, utility rates, resource availability and state and federal incentive opportunities.

Supported land lease acquisition, met tower data collection, turbine layout optimization, PILOT negotiations, local ordinance development and initial permitting of several utility-scale wind farms in upstate New York. Led project conception, site selection and initial development of a 30 million gallon per year biodiesel production facility in Albany, NY, with an anticipated capital cost of \$55 million. Established and cultivated strategic partnership with well established, regional home heating oil and transportation fuel distributor for the off-take, blending and marketing of biodiesel product. Created and led project presentations to a fuel distributor board of directors, a large multi-national petroleum company, and numerous other potential equity investors.

## **Merck & Co., Inc.** – 1997 to 2006

*Sourcing Analyst* – Executed an internal sourcing management process in the chemical process and utility equipment supply sectors to drive cost reduction opportunities via stakeholder mapping, market research, supplier negotiations and contract language reconciliation. Supported the achievement of \$23 million in expense savings and \$85 million in capital savings, both in excess of 2005 goals. Completed Operational Excellence Leaders training, including extensive education in the concepts of Six Sigma and Lean Manufacturing.

*Process Engineer* – Led a multi-functional team in the design, implementation of lessons learned and start-up of a large, single heat transfer fluid generation and distribution system in Barceloneta, Puerto Rico. Conducted process fit, site selection and technology transfer activities for a new active pharmaceutical ingredient ("API") manufacturing project, including comprehensive scope development, key site stakeholder reviews and new technology options analysis. Led basis of design and detailed design activities, including scope and P&ID development, equipment and instrument specification and hazardous operations reviews for an API capacity expansion project.

*Project Engineer* – Led manufacturing site remediation efforts in Elkton, VA, Ponders End, England and Haarlem, Holland including regulatory process management, operation and maintenance coordination, process optimization and monitoring study development. Provided design, procurement and field support to the RCRA landfill cap project, including daily supervision of contractor activities for the purpose of construction quality assurance, change order resolution, and health and safety oversight. Provided daily field and technical support to the operation of an onsite soil incinerator in Rahway, NJ, including soil management, cost tracking, control room operation and process optimization. Provided daily onsite project management and field support to a large factory decontamination and dismantlement in Rahway, NJ, including coordination of waste disposal, cost tracking and health and safety oversight.



## Tim Eves SVP, Development

Tim is responsible for leading NTE Energy's project development activities. These activities include project site identification, permitting, community and government relations and project level engineering. In addition, Tim manages the company's project developers and other project related support personnel.

Tim came to NTE Energy from Vercipia, a leader in the development and commercialization of cellulosic ethanol production technology. Prior to Vercipia, Tim worked in various management roles for Calpine Corporation in the areas of project development and origination. He also had a 20-year career with Westinghouse Power Generation in both domestic and international markets.

Tim has a Master of Business Administration (MBA) from Widener University in Philadelphia and The Crummer Business School at Rollins College in Winter Park, Fla., a Juris Doctorate (JD) from the University of Miami, and a Bachelor of Science in mechanical engineering (BME) from the University of Detroit. Tim is a member of the Florida State Bar Association.

### Education

Bachelor Mechanical Engineering  
University of Detroit

Master of Business Administration  
Widener University

Juris Doctorate  
University of Miami

### Professional Societies

Member  
Florida Bar Association

Past Board Member  
Tampa Hillsborough Economic  
Development Corporation

Past Chairman  
FL Partnership for Affordable  
Competitive Energy

### Prior Professional Experience

#### **Verenium/Vercipia Biofuels/Highlands Ethanol** – Tampa, FL – 2007 through 2010

*Vice President, Development* - Responsible for the development of Verenum/Vercipia's first commercial project, the Highlands Ethanol Project; including responsibility for: site selection; all commercial contracts; all permitting activities; securing of water supply and water discharge agreements; communications with counties, cities and other local organizations, Florida state and local governmental and regulatory activities; and, the identification of future development opportunities.

#### **Calpine Corporation** – Tampa, FL – 1999 through 2007

##### *Vice President Development and Asset Divestiture (2005-2007)*

- Management responsibility for divestiture of select assets located within the Eastern region, including identification of assets for divestiture and related financial analysis, identifying potential investors, negotiating transactions, and executing the stalking horse/bankruptcy auction process.
- Restructuring power sales contracts around Carville, Hog Bayou and Santa Rosa combined cycle facilities with ECG and Southern Power, and on Morgan and Decatur combined cycle facilities with TVA.
- Responsible for identification of future development opportunities.

*Vice President Marketing & Sales, Southeast (2003-2005)* - Management responsibility for all Calpine power marketing, sales and origination activities in the SE US, including management of origination team; responsibility for strategic planning and implementation; customer development; customer relationships; and closing long term origination contracts to provide sufficient revenues to enhance the profitability of Calpine's fleet of energy centers located in the SERC and FRCC NERC Regions. Customers include: large IOUs; governmental agencies; smaller IOUs; municipalities; cooperatives; and industrials. Closed deals with Entergy, Cleco, TVA, Florida Power and Light, Tampa Electric Company, ECG, Seminole Electric Coop; Florida Municipal Power Agency; and others.

*Director Business Development, Eastern Region (1999-2003)* Responsible for Calpine's Florida project development activities, including: power project identification, both greenfield and acquisition opportunities; securing of water supply; communications with counties, cities and other local organizations; Florida state and local governmental and regulatory activities; and, oversight of permitting, engineering, marketing and financing activities. Successfully led the development of the Osprey Energy Center, the only combined cycle power plant to be licensed by



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an IPP in Florida.

## **BBI Power Corporation** –Annapolis, MD – 1998 through 1999

*Senior Vice President* – Responsible for world-wide project development activities, including: project identification; joint venture partner identification and negotiation of agreements; determination of plant configuration; pro forma analysis; preparation of proposal for and negotiation of PPA and steam supply contracts; permitting and financing. Project activity on the Indian subcontinent, Eastern Europe, the Mid East, Caribbean and the United States.

## **Westinghouse Electric Corporation – Power Generation Divisions** – 1979 through 1998

Responsibilities primarily focused on the development of power generation projects and the sale of power generation equipment and services, including proposal preparation and contract negotiation. positions included:

- *Director, International Marketing* – Eastern Europe, the Mid East and the Indian subcontinent; worked with major in country and Western companies in all aspects of project development.
- *Manager, Domestic Marketing* – Southeastern U.S., Northeastern U.S. and Latin America; responsible for a team selling new unit equipment in these markets. Led the team which sold the first “F” class combustion turbines in the industry.
- *Regional Marketing Manager* – Independent Power Producer Market. Responsible for selling new equipment and extended services to IPPs in the Southeast and Western US.
- *Special Sales Representative* – Responsible for sale of complete line of Westinghouse generation products and services to Florida Power Light.

*Various other Marketing and Sales Support Positions*



# NTE ENERGY



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Industrial and Systems Engineering  
Georgia Institute of Technology  
(Cum Laude)

## Mike Bradley SVP, Commercial Services

Mike provides leadership on all aspects of commercial efforts for NTE Energy. In this role, Mike is responsible for NTE's overall commercial strategy and execution which includes the development of regional commercial strategy, and management of power purchase agreement origination, electricity hedging, risk identification, risk management, power and fuel contract restructuring, power and fuel contract origination, and power and fuel contract negotiation activities for NTE Energy's development projects. In particular, Mike led the commercial efforts for the Kings Mountain Energy Center and Middletown Energy Center, both projects successfully financed and under construction by NTE Energy.

Mike brings over 25 years of experience in the electric power and natural gas industries with a wide range of commercial contacts in various natural gas and power industry sectors. Prior to joining NTE Energy, he spent 14 years in origination roles at Dynegy. As Senior Director, Origination he led the company's origination efforts in the Northeast, East, ERCOT, Midwest, and Southeast.

## Prior Professional Experience

**Dynegy, Inc.** – Atlanta, GA – 1998 through 2011

*Senior Director, East Origination* - Responsible for all origination activities necessary to secure incremental customer accounts, maintain existing customer relationships, identify business opportunities, develop innovative energy products to manage risk and increase hedge profitability, prepare proposals and sales presentations, and negotiate energy sale and purchase contracts in the ERCOT, ISO New England, NY ISO, PJM, MISO and SERC regions. Consistently exceeded annual transaction (sale and purchase) and revenue goals. Successfully developed and implemented origination, risk management, and hedging strategy in all regions. Significantly expanded customer base in all regions to include investor owned utilities, municipal utilities, electric cooperatives, and liquidity providers. Successfully identified electric capacity and energy sales opportunities and lead negotiations with customers through execution of final power sale agreements. Effectively identified electric supply purchase opportunities and worked with suppliers through execution of final power purchase agreements.

**North Carolina Electric Membership Corp.** – Raleigh, NC – 1991 through 1998

*Manager of Power Resources* - Managed Power Resources and Resource Planning departments and all activities required to complete the annual Integrated Resource Plan including obtaining incremental power supply resources to meet system energy needs and negotiating power purchase contracts for a 2,500 MW electric cooperative. Managed Power Resources and Resource Planning departments. Duties included goal setting, staffing, and performance appraisal. Implemented procedures for developing Integrated Resource Plan (IRP) to meet North Carolina Utility Commission (NCUC) requirements and successfully prepared regulatory filing and support testimony for NCUC acceptance on an annual basis. Supervised development of annual IRP. This process included modeling of system load profiles, existing supply resources, corporate financial structure and effectively presenting IRP results to Board of Directors to secure approval on an annual basis. Managed resource acquisition activities that resulted in



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obtaining incremental supply-side power supply resources. Included in this process was development and issuance of request for proposals, evaluation of supply alternatives, and contract negotiation. Managed resource replacement projects that resulted in termination of an existing power supply contracts and development of new long-term power supply contracts.

### **Energy Management Associates – Atlanta, GA – 1989 through 1991**

*Consultant, Financial Applications Specialist* – Responsible for providing consulting services in areas of production costing, integrated resource planning, and financial planning along with implementing new features and maintaining quality assurance procedures for the various modules of PROSCREEN II Integrated Resource Planning System. Additional responsibilities included marketing consulting services and software upgrades to assigned clients, providing customer support, training, development of client specific documentation, and development of client databases.



## Chris Rega

SVP, Engineering and Construction

Chris adds over 25 years of engineering experience to NTE Energy's team. Having previously served in technical and leadership roles at Parsons, Siemens and InterGen, Chris has led engineering oversight on dozens of power plants in several different countries. In his current role at NTE Energy, Chris leads the group responsible for power plant engineering and construction. In this role, Chris manages a team through the project development phase responsible for conceptual design; thermal performance, capital cost and operations and maintenance cost estimates; construction schedules; permit support; major contract bid solicitation, evaluation, and negotiation; and financing due diligence. Major contracts include equipment purchase and sale agreements, EPC contracts, O&M contracts, and CTG long term service agreements. Chris also manages a team through the project construction phase responsible for site management, contract management, cost and schedule monitoring and control, utility interconnections, and design reviews.

### Education

Bachelor of Science  
Mechanical Engineering  
Northeastern University

### Selected Projects –

- Middleton Energy Center, 500 MW Combined Cycle Power Plant
- Kings Mountain Energy Center, 500 MW Combined Cycle Power Plant
- Pecan Creek Energy Center, 300 MW Simple Cycle Power Plant
- Killingly Energy Center, 550 MW Combined Cycle Power Plant
- Reidsville Energy Center, 550 MW Combined Cycle Power Plant
- Pickaway Energy Center, 1200 MW Combined Cycle Power Plant

### Prior Professional Experience

#### InterGen – 2000 through 2013

*Director, Engineering Services* - Supervised corporate group responsible for power plant development engineering, thermal performance design and optimization, and plant outage management. Managed owner's engineer in preparing conceptual design and scope documents, environmental permit support, RFP solicitations, bid analyses, contractor selection, and financing support, and design reviews. Responsible for technical inputs to project development financial models. Negotiated with contractors during EPC contract development. Performed due diligence to evaluate and pre-qualify various EPC contractors and combustion turbine technology offerings. Responsible for developing and maintaining corporate technical standards.

*Manager, Engineering* - Served as owner's lead engineer during the development, design, construction, commissioning, and commercial operation phases of multiple projects. Developed technical scope documents in coordination with contractor. Reviewed major design documents for scope comparison, operability, maintainability, and safety. Witnessed factory testing of major plant equipment as well as plant performance testing. Supported owner's construction personnel with technical decisions and queries. Supported owner's operating and maintenance personnel with technical queries during commissioning as well as with post commissioning modifications and upgrades.

#### Selected Projects –

- Bajio Power Project, 600 MW Combined Cycle Power Plant
- La Rosita Power Project, 1000 MW Combined Cycle Power Plant
- Wildflower Power Project, 250 MW Simple Cycle Power Plant
- Spalding Power Project, 800 MW Combined Cycle Power Plant
- Rijnmond Power Project, 800 MW Combined Cycle Power Plant
- Island Power Project, 800 MW Combined Cycle Power Plant
- Maastroom Power Project, 400 MW Combined Cycle Power Plant
- San Luis de la Paz Power Project, 200 MW Combined Cycle Power Plant
- Altamira Compression Station, 40,000 HP Gas Turbine Driven Compression Station

#### Siemens Westinghouse Power Corporation – 1998 through 2000

*Senior Project Engineer* - Served as technical interface between Siemens Westinghouse,



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Bachelor of Science  
Mechanical Engineering  
Northeastern University

customer, and sub-contractors. Guided overall technical direction of project. Led discussions on major technical decisions. Coordinated design, procurement, and delivery of project equipment. Monitored project schedule to avoid project delays. Developed pricing for customer change orders.

*Advanced Mechanical Engineer* - Prepared design basis and functional requirements documents. Specified major equipment including condensers, cooling towers, boiler feedwater pumps, and circulating water pumps. Developed Piping and Instrumentation Diagrams.

### Selected Projects –

- Rockingham Power Project, 800 MW Simple Cycle Power Plant
- 2x1 501G Reference Plant, 750 MW Combined Cycle Power Plant
- Ironwood Power Project, 750 MW Combined Cycle Power Plant
- Magic Valley Project, 750 MW Combined Cycle Power Plant

### Parsons Engineers and Constructors – 1990 through 1998

*Lead Mechanical Engineer* – Supervised mechanical engineers and designers. Delegated and coordinated required project mechanical activities. Reviewed complete project mechanical design. Interfaced with clients; including responding to letters and attending project review meetings. Coordinated with other engineering disciplines. Maintained schedules and budgets.

*Mechanical Engineer* - Prepared engineering proposals to be submitted to prospective clients. Developed and maintained Piping and Instrumentation Diagrams. Prepared calculations which determined the size of piping and equipment. Specified and procured mechanical equipment. Analyzed equipment vendor bids for compliance with specified performance and design parameters. Reviewed vendor design drawings and documents. Developed design criteria documents and system descriptions.

*Construction / Commissioning Engineer* - Supervised construction activities to assure installation adhered to the design. Answered sub-contractors' questions and revised designs as necessary. Performed functional testing of plant instrumentation and Distributed Control Systems. Commissioned power plant systems after completion of construction. Operated entire power plants from station control rooms. Performed power plant testing to demonstrate performance and reliability guarantees. Trained permanent power plant operators to prepare for facility turnover.

### Selected Projects –

- Pusan Combined Cycle Plant, 2000 MW Combined Cycle Power Plant
- Kwangyang Combined Cycle Plant, 500 MW Combined Cycle Cogeneration Plant
- Sacramento Power Authority Cogeneration Plant, 150 MW Combined Cycle Cogeneration Plant
- Brooklyn Navy Yard Cogeneration Plant, 280 MW Combined Cycle Cogeneration Plant
- Holtsville Combined Cycle Plant, 150 MW Combined Cycle Independent Power Plant
- Onondaga Cogeneration Plant, 80 MW Combined Cycle Cogeneration Plant
- Sunnyside Power Plant, 55 MW Circulating Fluidized Bed Power Plant
- Beaumont Cogeneration Plant, 55 MW Combined Cycle Cogeneration Plant
- Dartmouth Power Plant, 70 MW Combined Cycle Independent Power Plant
- UCLA Cogeneration Facility, 40 MW Combined Cycle Cogeneration Plant

### Virginia Power – 1986 through 1989

*Mechanical Engineering Assistant* - Inspected steam surface condensers and prepared work orders for necessary repairs. Conducted calculations for pipe wall thinning due to erosion and corrosion. Predicted single phase water erosion and corrosion wear rates with EPRI computer code. Obtained security clearance for nuclear facilities.

## **Experience Summary**

Ms. Gresock has over 32 years of experience in regulatory issues as they relate to environmental permitting and compliance for a wide range of projects. For most of her career, she has specialized in permitting and due diligence activities for projects in the energy sector. Her project experience includes obtaining environmental approvals for more than 20,000 megawatts (MW) of electric generation capacity. Ms. Gresock has provided development permitting and support for a wide range of facilities, including fossil-fuel fired power facilities, renewable energy facilities, natural gas pipelines, electric transmission lines, and liquefied natural gas (LNG) facilities. She has supported project development from early definition phases, through obtaining licensing approvals, construction oversight and operational compliance support. She has represented clients on environmental matters at public hearings and has spoken at seminars on environmental issues. Her knowledge of energy project issues, based on her consulting experience and experience working within the industrial sector, brings practical consulting advice to successfully develop and implement environmental strategies that meet project operational needs and regulatory requirements.

## **Education**

BS, Environmental Design, University of Massachusetts, 1984

## **Representative Power Plant Permitting Experience**

### **NTE Connecticut, LLC, Killingly Energy Center, Killingly, Connecticut**

Project manager and lead environmental consultant for permitting of the Killingly Energy Center, an approximately 550-MW combined cycle electric generating facility in Killingly, Connecticut. Responsibilities have included environmental documentation associated with Connecticut Siting Council documentation, a Permit Application for Stationary Sources of Air Pollution, as well as other key environmental permits and approvals. Support of the Environmental Justice (EJ) and Connecticut Siting Council process included development of and support of an EJ Plan and other local engagement, including active participation in community meetings.

### **CPV Towantic, LLC, CPV Towantic Energy Center, Oxford, Connecticut**

Project manager and lead environmental consultant for permitting of the CPV Towantic Energy Center, an approximately 800-MW combined cycle electric generating facility in Oxford, Connecticut. Responsibilities have included environmental documentation associated with a Petition for Changed Conditions before the Connecticut Siting Council and a Permit Application for Stationary Sources of Air Pollution, as well as providing outreach support and focus on the full range of considered environmental and community issues. Tetra Tech continues to provide support during the construction process.

### **International Power America, Expansion and Development Site Review, Connecticut and Massachusetts**

Provided critical issues assessment documentation to review five potential sites in Connecticut and Massachusetts for potential new development or expansion projects. Detailed regulatory and issue review, development of milestone scheduling to demonstrate the potential for licensing feasibility in a timely manner, and identification of key tasks were provided to support the client's selection of projects for development. Several sites included consideration of historic site contamination issues. Environmental permitting support was provided for two projects selected for development.

**Elemental Power Group, Fuel Cell Feasibility Assessment and Permitting, Bridgeport and Danbury, Connecticut**

Supported site evaluation and selection, feasibility assessment, and permit plan development associated with two proposed fuel cell development projects. Provided inputs toward obtaining funding for project development, and prepared initial permitting documentation.

**Power Development Company, Milford Power Project, Milford, Connecticut**

Managed full-service environmental permitting for a two-unit 540-MW electric generating facility located in the coastal zone proximate to the Housatonic River. As one of the first merchant power proposals in Connecticut, coordination with regulatory agencies was necessary to define appropriate levels of assessment to facilitate an expedient review. The use of wastewater treatment plant effluent for demand reduction on the public water supply, the use of a single stack of lower than good engineering practice (GEP) height to minimize visual intrusion on the surrounding community, and the selection of a site that would minimize impact on environmental features and eliminate the need for extensive off-site interconnects were key elements of the project's design. Activities included preparation of Connecticut Siting Council documentation, air quality permitting, water and wastewater permitting, and coordination with the local community for environmental review of such issues as traffic and noise.

**Confidential Client, Critical Issues Assessment, Southwestern Connecticut**

Completed critical issues assessment in a phased manner to support a potential 200-MW simple cycle electric generating facility proposed in southwestern Connecticut. In addition to issues identification and development of a permitting plan, air dispersion modeling was completed to support stack height optimization and feasibility assessment.

**NTE Ohio, LLC, Middletown Energy Center, Middletown, Ohio**

Full environmental licensing of a proposed 525-MW natural gas-fired combined cycle facility located in Butler County, Ohio. Work has included preparation of Ohio Power Siting Board (OPSB) applications for the generating facility and electric transmission interconnection; documentation and mapping; wetlands; noise; and cultural resources. Tetra Tech continues to provide support for the project during the construction process.

**NTE Ohio II, LLC, Pickaway Energy Center, Pickaway County, Ohio**

Environmental licensing of a proposed 1,000-MW natural gas-fired combined cycle facility located in Pickaway Township, Ohio. Work has included wetlands; cultural resources; and water/wastewater feasibility review. As the project progresses, full OPSB mapping, documentation and support will be provided for the generating facility and its interconnections, including technical focus on specific environmental disciplines.

**Clean Energy Future-Trumbull, LLC, Trumbull Energy Center, Village of Lordstown, Ohio**

Full environmental licensing of a proposed 800-MW natural gas-fired combined cycle facility located in Trumbull County, Ohio. Work includes preparation of OPSB documentation and mapping; a Prevention of Significant Deterioration (PSD) air permit application; wetland and species activities; cultural resources; water and wastewater feasibility review; and related resource permits and outreach.

**Apex Power Group, LLC/Caithness Energy L.L.C., Guernsey Power Station, Oregon, Ohio**

Full environmental licensing of a proposed 1,650-MW natural gas-fired combined cycle facility located in Guernsey County, Ohio. Work includes preparation of OPSB documentation and mapping; a PSD air permit application; and related resource permits.

**Clean Energy Future-Oregon II, LLC, Oregon Energy Center, Oregon, Ohio**

Full environmental licensing of a proposed 800-MW natural gas-fired combined cycle facility located in Oregon, Ohio. Work includes preparation of OPSB documentation and mapping; a PSD air permit application; and related resource permits and outreach.

**Advanced Power NA, South Field Energy, Columbiana County, Ohio**

Full environmental licensing of a proposed 1,105-MW natural gas-fired combined cycle facility (with ultra-low sulfur distillate backup) located in Columbiana County, Ohio. Work has included preparation of OPSB applications for the generating facility, natural gas pipeline interconnection and electric transmission interconnection; documentation and mapping; a PSD air permit application; wetlands; noise; cultural resources; and activities associated with water use and wastewater discharge alternatives. Activities included a full National Pollutant Discharge Elimination System (NPDES) permit associated with wastewater discharge into the Ohio River. Also provided community outreach support.

**Clean Energy Future, LLC, Lordstown Energy Center, Village of Lordstown, Ohio**

Full environmental licensing of a proposed 800-MW natural gas-fired combined cycle facility located in Trumbull County, Ohio. Work includes preparation of OPSB documentation and mapping; a PSD air permit application; and related resource permits and outreach. Tetra Tech continues to provide support to the project during the construction process.

**Advanced Power NA, Carroll County Energy, Carroll County, Ohio**

Full environmental licensing of a proposed 750-MW natural gas-fired combined cycle facility located in Carroll County, Ohio. Work has included preparation of OPSB applications for the generating facility, natural gas pipeline interconnection and electric transmission interconnection; documentation and mapping; a PSD air permit application; wetlands; noise; cultural resources; and activities associated with water use and wastewater discharge alternatives. Also provided community outreach support. Tetra Tech continues to provide support during the construction process.

**North American Project Development, Oregon Clean Energy Center, Oregon, Ohio**

Full environmental licensing of a proposed 800-MW natural gas-fired combined cycle facility located in Oregon, Ohio. Work has included preparation of OPSB documentation and mapping; a PSD air permit application; U.S. Army Corps of Engineers application; amendments and updates to the OPSB approvals; and related resource permits.

**Advanced Power North America, Cricket Valley Energy Project, Dover, New York**

Environmental licensing for a 1,000-MW combined cycle project requiring an Environmental Impact Statement (EIS) through the State Environmental Quality Review Act (SEQR) process as well as federal, state and local permits. The project's location on an industrial property, portions of which have been in use for many years, requires consideration of potential site contamination and cleanup, as well as building demolition issues. Other project issues include air quality; wetland and endangered species issues associated with the site's proximity to the Swamp River; development of an on-site groundwater supply; stormwater management; and other potential community concerns such as noise, visual, traffic and effect on services. Supported outreach through public open house and topical Working Group meetings.

**Pure Energy Resources, Bayonne Energy Center, Bayonne, New Jersey**

Project manager for environmental permitting associated with a proposed 512-MW natural gas- and oil-fired simple cycle electric generating facility. Issues included air quality, coastal consistency review, historical site contamination issues, water supply alternatives evaluation, and coordination associated with the proposed underwater electric cable proposed to provide project output to meet New York City energy needs.

**Calpine Corporation, Fremont Energy Center, Sandusky County, Ohio**

Managed full environmental licensing for a proposed 700-MW combined cycle facility located near Fremont. The project's wet cooling system utilized city water supplies, and the project infrastructure utilized the adjacent rails-to-trails corridor. Work included preparation of an OPSB documentation and mapping, a PSD air permit application, and permits related to wastewater discharge to the local treatment plant.

**Calpine Corporation, Lawrence Energy Center, Lawrence County, Ohio**

Full environmental licensing for a proposed 2,200-MW combined cycle facility. The site's location on the shores of a major surface water body required consideration of cultural resources, wetland and floodplain issues. The project's proposed withdrawal and discharge of surface water required NPDES authorization as well as review by the U.S. Army Corps of Engineers in that regard. Complex terrain immediately proximate to the site resulted in the need for interactive source air quality modeling. Stack height optimization required consideration of a nearby airport as well. In addition to the resource permits noted, an OPSB application was prepared and approved, and a Memorandum of Agreement developed to protect cultural resources at the site.

**Sithe Energies, Heritage Station, Oswego, New York**

Managed environmental licensing for an 800-MW combined cycle project on the 190-acre Independence Station cogeneration facility site. The project required review under the Article X process. As a part of this process, detailed stipulations were developed as a scope for the environmental evaluation. The resulting seven-volume application was confirmed by the Department of Public Service to have completely responded to the stipulation requirements, and was approved under an expedited settlement process. Key issues included the use of Lake Ontario water in the proposed wet cooling system, and potential cumulative effects associated with the project and the adjacent cogeneration facility. The full range of environmental disciplines was examined for the project.

**Delta Power, Hyperion Power Project, Allen County, Ohio**

Managed the preparation of the OPSB application for an approximately 750-MW combined cycle facility located in Fort Shawnee Township. Issues included avoidance of underground piping systems associated with the adjacent tank farms, and coordination with the project team of consultants responsible for a variety of technical issues.

**Sithe Energies, Medway Station Expansion Project, Medway, Massachusetts**

Managed environmental licensing efforts for a 540-MW natural gas-fired peak electric generating project proposed to augment existing on-site peaking capability. As the first simple cycle peaking project proposed in Massachusetts in some time, this project involved new applications for existing environmental standards, and additional documentation to support the appropriateness of technology selection. Issues included air quality, noise, and local concerns with regard to regional power plant development. Massachusetts Energy Facilities Siting Board (EFSB) approval, including expert witness testimony, was required for the project. In addition to technical permit applications at the state level, comprehensive environmental documentation was required through the Massachusetts Environmental Policy Act (MEPA) process. Early involvement in the project allowed for optimal siting and design to best minimize impacts of the proposed facility, and allow for mitigation of existing facility impacts, to assure regulatory officials and the local community that impacts associated with the proposed expansion were acceptable.

**Peabody Power, Peabody Power Facility, Peabody, Massachusetts**

Obtained full environmental licensing for a 99-MW peak electric generating facility to be operated on natural gas with oil backup. Documentation that EFSB review was not required was obtained via a formal jurisdictional advisory opinion process. MEPA Certification for the project was received following review

of the Environmental Notification Form, with no Environmental Impact Report required. Other environmental issues included consideration of site remediation requirements, air permitting, noise impact analysis, and work within wetland buffer zones.

**Competitive Power Ventures, L.P., Terrapin Power Project, Savannah, Georgia**

Full environmental licensing for a proposed 800-MW combined cycle facility utilizing natural gas with low-sulfur fuel oil backup. Its location proximate to the Savannah River required consideration of wetland and floodplain issues. The site was also located within an industrially zoned area with a long history of industrial uses; a detailed site investigation was undertaken, including coordination with the United States Environmental Protection Agency (USEPA) and Georgia Environmental Protection Division to identify remedies that would return the site to a useful purpose. The site's proximity to Wolf Island, a PSD Class I area, required a detailed assessment of the project's potential effect on visibility in that area. The project proposed to utilize reclaimed water from an adjacent publicly owned treatment works for its wet cooling system.

**Sithe/Exelon, Port City Power Project, Waukegan, Illinois**

Full environmental licensing for an approximately 900-MW natural gas-fired combined cycle facility on an industrial site near Lake Michigan. Air quality impact analysis, noise assessment, ecological evaluation, consideration of site remediation needs, and visual impact assessment were all conducted for this project.

**Competitive Power Ventures, L.P., Combined Cycle Facility, Screven County, Georgia.**

Prepared an air permit application, including consideration of PSD Class I impacts, for this 800-MW combined cycle facility. Adjacent to the Savannah River, the project proposed the use of surface water in a wet cooling system and discharge to a nearby agricultural facility in order to maximize water recycling. Environmental site assessment, cultural resource investigations and wetland delineations were conducted for the project.

**Duke Energy North America, Washington Energy Facility, Washington County, Ohio**

Managed environmental licensing for a 620-MW combined cycle facility utilizing wet cooling. Prepared documentation and mapping for the OPSB review and the air permit application. Issues included archaeological resources and water issues associated with the proposed intake and discharge into the Muskingum River.

**Duke Energy North America, Madison Generating Station, Butler County, Ohio**

Managed environmental licensing for a 640-MW simple cycle peaking facility consisting of eight General Electric (GE) 7EA units. Environmental support included documentation and mapping for the OPSB review, preparation of air permitting documentation, evaluation of the site for environmental and cultural resources, and documentation of construction stormwater management systems. The project began construction within six months of the initial permit application filing; this expedited review involved continual agency interaction and close coordination with the project's development and construction team.

**Duke Energy North American, Audrain Generating Station and Bollinger Generating Station, Missouri**

Managed environmental licensing for two separate 640-MW simple cycle peak electric generating facilities consisting of eight GE 7EA units. Environmental approvals for the Audrain Generating Station were received on an expedited schedule. Issues included air permitting, cultural resources, Indiana bat habitat review, stormwater management and wastewater discharge authorization. The Bollinger Generating Station involved similar issues. In addition, the Bollinger site's proximity to a PSD Class I area involved consultation and review by the Federal Land Manager, including a CALPUFF analysis to address the potential for visibility and regional haze issues.

**American National Power, ANP Bellingham Power Project, Bellingham, Massachusetts**

Managed environmental permitting efforts associated with a proposed two-unit 580-MW natural gas fired facility. Comprehensive environmental documentation for both EFSB and MEPA review was completed, in addition to preparation of environmental applications. A key issue for this project was the number of similar projects proposed in the area, and the resulting need for cumulative impact assessment for air quality and water use. The use of dry cooling technology was incorporated to significantly limit facility water demand; proximity to the Charles River and the presence of on-site wetlands were also factors in the project's design and permitting. Coordination with Algonquin Gas Transmission Company was required to address impacts associated with a proposed natural gas pipeline interconnect crossing the Charles River.

**U.S. Generating Company, Millennium Power Project, Charlton, Massachusetts**

Managed full-service environmental permitting for the 360-MW Millennium Power project. This included preparation of comprehensive environmental documentation for both the EFSB and for MEPA review. Issues included air quality; potential effects of water withdrawal on the Quinebaug River; wetland impact; and archaeological resource avoidance. In addition to site development, the project also included offsite improvements; these piping corridors were also included in the permitting effort. Permit applications were prepared to meet federal, state and local requirements, and environmental support provided. Wetlands and salamander habitat creation were elements of project mitigation for which plans were developed and oversight provided.

**U.S. Generating Company, Cataula Generating Project, Harris County, Georgia**

Managed environmental permitting for the Cataula Generating Project, a proposed natural gas-fired peak electric generating project consisting of one to four units. The need to be prepared to meet potential future market demands required strategic involvement in presenting project information; the goal was to obtain permits with maximum flexibility while providing regulators with a level of comfort to allow their issuance of project approvals in a timely manner. Air permit applications, U.S. Army Corps of Engineers' wetland approval, and NPDES permitting were required. In addition, a comprehensive Environmental Assessment was prepared to support local permitting efforts, and local approvals (such as for the proposed on-site septic system) were overseen. A series of environmental analysis were performed to support project financing, including a site assessment for site contamination potential, and protected species and cultural resource screening.

**South Carolina Electric and Gas, Peak Combustion Turbines, Canadys, South Carolina**

Managed the preparation of an Environmental Assessment in support of an application before the Public Service Commission to permit an oil- or natural gas-fired peaking facility. A range of environmental issues were examined, including a wetland delineation using U.S. Army Corps of Engineers methodology. Special issues related to the facility's proximity to the existing coal-fired power plant; the extent to which existing services could be used at the proposed facility was also determined.

**Duke Energy North American, Marshall County Generating Station, Kentucky**

Managed environmental licensing for a 640-MW simple cycle peak electric generating facility consisting of eight GE 7EA units. In addition to air licensing, this project involved wetland delineation and avoidance, permits for work within mapped floodplain, Indiana bat habitat issues, stormwater management plan development and testing of groundwater to develop a water source for the project.

**Duke Energy North America, Vermillion Generating Station, Vermillion County, Indiana**

Managed environmental licensing for a 640-MW simple cycle peak electric generating facility consisting of eight GE 7EA units. Environmental support included evaluation of the site for environmental and cultural resources, preparation of air permit documentation, and preparation of an erosion control plan to

identify construction stormwater management systems. An on-site groundwater well development program was also successfully completed for this project. The project began construction within six months of the initial permit application filing; this expedited review involved continual agency interaction and close coordination with the project's development and construction team.

**Duke Energy North America, DeSoto Generating Station, DeSoto, Indiana**

Managed environmental licensing for a 640-MW simple cycle peak electric generating facility consisting of eight GE 7EA units. Environmental conditions at the site were evaluated, and an air permit application prepared and submitted. An on-site groundwater well development program was also required at this site.

**Duke Energy North America, Lee County Generating Station, Lee County, Illinois**

Assisted client in initial site screening stage, assessing site for critical issues. Numerous other Illinois sites were also evaluated for this analysis. Following site selection, managed environmental licensing for a 640-MW simple cycle peak electric generating facility. Air permitting issues included the proximity of a nearby power plant proposal, and the agency's need to understand the potential for cumulative impacts. Water needs at the site were to be served through development of an on-site well.

**Sonat, Upson Generating Project, Upson, Georgia**

Managed the preparation of air permit documentation for a proposed peak electric generating power facility. Dispersion modeling was completed along a compressed timeline, including addressing issues pertaining to terrain impacts in the project's vicinity.

**U.S. Generating Company, Peaking Units, Harris County, Georgia**

Managed environmental permitting for the Cataula Generating Project, a proposed natural gas-fired peak electric generating facility consisting of one to four units. Air permit applications, U.S. Army Corps of Engineers' wetland approval, and NPDES permitting were required. In addition, a comprehensive Environmental Assessment was prepared to support local permitting efforts, and local approvals (such as for the proposed on-site septic system) were overseen. A series of environmental analysis were performed to support project financing, including a site assessment for site contamination potential, and protected species and cultural resource screening.

**U.S. Generating Company, Environmental Permitting Specialist, Nationwide**

As a member of the corporate environmental department, primary responsibilities included: management of permitting efforts, both for new projects and for existing operational facilities; direction of all Title V operating permit applications, company-wide; review of potential acquisitions to identify critical issues and determine appropriate actions; assessment of proposed greenfield or retrofit projects to identify opportunities and constraints, and to develop permitting plans; and strategic support for international development efforts.

**Air Products and Chemicals, Coal-Fired Cogeneration Facility, York County, Pennsylvania**

Managed the preparation of an Environmental Information Volume (EIV) for the Department of Energy (DOE) for a proposed coal-fired cogeneration facility. The project had obtained a grant from DOE under the Clean Coal Technologies program, thereby requiring multidisciplinary review under the National Environmental Policy Act (NEPA). Project activities included strategic consultation with DOE to establish protocols for preparation of the EIV, site reconnaissance, the full range of environmental analyses, EIV documentation, and response to agency and public comment arising from the public scoping meeting. An additional responsibility was coordination with DOE and its third-party consultant to facilitate preparation of an EIS for the York County project.

**Duke Energy Company, Coal Gasification Generating Facility, Camden, New Jersey**

Project manager for multidisciplinary environmental permitting efforts associated with a proposed integrated gasification combined cycle (IGCC) coal-fired electric generating facility. Upon award of a Clean Coal grant, DOE negotiation and preparation of an EIV was initiated.

**Biodevelopment Incorporated, L'Energia, Lowell, Massachusetts**

Managed the regulatory strategy and permit preparation for an 85-MW natural gas-fired cogeneration facility proposed to supply steam to the Prince Company and electricity to Boston Edison. Major issues included air emissions, noise generation, discharge of stormwater into wetland resources, steam line construction impacts, and the proximity of the site to a known hazardous waste containment area.

**Cogentrix, Inc., Coal-Fired Cogeneration Facility, Mayaguez, Puerto Rico**

Managed the preparation of an EIS and other permit applications on both a federal and commonwealth level for a 300-MW coal-fired cogeneration facility on the coast of Mayaguez, Puerto Rico. Major issues included coordination of the joint regulatory process; in-field air monitoring, modeling, and control technology analysis for a federal and commonwealth Environmental Quality Board (EQB) air permit application; air quality emission risk assessment; comprehensive aquatic data collection in conjunction with NPDES and EQB discharge permits; and U.S. Army Corps of Engineers permitting for construction of the proposed coal handling conveyance to be constructed in the Mayaguez Bay.

**U.S. Generating Company, Cogeneration Facility, Rotterdam, New York**

Successfully obtained environmental permits for a 230-MW electric generating facility. Responsibilities included preparation of a multidisciplinary EIS under SEQR, U.S. Army Corps of Engineers wetlands permits, state wetland permits, air permits, water discharge permits, and Public Service Commission documentation for the proposed electrical interconnections. Enabled the project to meet an aggressive schedule for obtaining environmental approvals.

**U.S. Generating Company, Cogeneration Facility, Guilderland, New York**

Managed environmental permitting for a 230-MW independent power production facility. Responsibilities included preparation of a multidisciplinary EIS under SEQR, U.S. Army Corps of Engineers wetlands permits, air permits, and Public Service Commission approvals for proposed natural gas and electrical interconnections.

**New England Power Service Co., Manchester Street Station, Providence, Rhode Island**

Prepared a full-scope Environmental Assessment and environmental permit applications for repowering the Narragansett Electric Company's existing Manchester Street Station and associated new electric transmission system. Analyzed baseline environmental conditions to identify the projected impact, and developed mitigation to minimize identified impacts. Key issues included air quality, thermal discharges into the Providence River, and the preparation of state wetland applications.

**Boston Thermal Cogeneration Corp., Cogeneration Facility, Boston, Massachusetts**

Developed the strategy for and managed the permitting of a gas and oil fired cogeneration facility providing steam to the existing Boston Thermal distribution system and electricity to Boston Edison's power network. Permits were required from all levels of government, including a comprehensive MEPA review. Issues including remediation of existing site contamination, air quality impacts, health risk concerns, traffic and noise. The location of the site on filled tidelands required compliance with coastal regulatory standards as well. Continuous interaction with community groups and regulatory agencies was an important component of the permitting strategy.

## Experience Summary

Mr. Sellars has over 35 years of environmental consulting experience specializing in siting, comprehensive environmental licensing, and transactional due diligence support for energy facilities nationwide. Mr. Sellars' experience includes extensive involvement with environmental regulations and permitting strategies, preparation of environmental impact statements, environmental risk profiling and expert witness testimony. Mr. Sellars has directed due diligence assessments for a wide variety of energy and industrial facilities. He has considerable experience with a range of risk profiling techniques and is a frequently invited speaker on due diligence topics. He has participated in transactional due diligence reviews involving the acquisition of over 100 power plants. Mr. Sellars has directed numerous electric generating plant siting studies, permitting feasibility analyses, and comprehensive licensing efforts. He has directed or played a key role in the successful permitting of more than 40 electric generating facilities, totaling over 20,000 megawatts (MW) of new power generation. Mr. Sellars has experience with a wide variety of power generation technologies. He has provided expert witness testimony on energy facility environmental issues in eight states.

## Education

BS, Natural Resources, Cornell University, 1977

## Project Experience

### *Conventional Power Plant Permitting Experience*

#### **NTE Energy, Killingly Energy Center, Killingly, Connecticut**

Senior Technical Advisor for the comprehensive environmental licensing of a 540-MW dual-fueled combined-cycle electric generating facility.

#### **Competitive Power Ventures, Towantic Energy Center, Oxford, Connecticut**

Senior Technical Advisor for the comprehensive environmental licensing of an 800-MW dual-fueled combined-cycle electric generating facility. Provided expert witness testimony before the Connecticut Siting Council.

#### **Power Development Company/El Paso Energy, Milford, Connecticut**

Officer-in-Charge for siting and comprehensive environmental licensing of a 540-MW dual-fueled combined-cycle electric generating facility in Milford, Connecticut. Provided expert witness testimony before the Connecticut Siting Council.

#### **Power Development Company/El Paso Energy, Meriden, Connecticut**

Officer-in-Charge for siting and comprehensive environmental licensing of a 540-MW dual-fueled combined-cycle electric generating facility in Meriden, Connecticut. Provided expert witness testimony before the Connecticut Siting Council.

#### **Confidential Client, New Haven, Connecticut**

Environmental permitting feasibility assessment for a proposed dual-fueled simple-cycle peak electric generating facility in New Haven, Connecticut.

#### **Confidential Client, Bridgeport, Connecticut**

Environmental permitting feasibility assessment for a proposed dual-fueled combined-cycle electric generating facility in Bridgeport, Connecticut.

#### **Confidential Client, New Milford, Connecticut**

Environmental permitting feasibility assessment for a proposed dual-fueled combined-cycle electric generating facility in New Milford, Connecticut.

**NRG, Canal Unit 3, Sandwich, Massachusetts**

Project manager for the comprehensive environmental licensing of a 350-MW dual-fueled simple-cycle peak electric generating unit at Canal Station. Responsible for the Massachusetts Environmental Policy Act (MEPA) Environmental Impact Report, Energy Facilities Siting Board Petition, Cape Cod Commission Development of Regional Impact application, air quality permit applications, Coastal Zone Management consistency determination, and Chapter 91 waterways license application. Provided expert witness testimony before the Energy Facilities Siting Board.

**Sithe New England, Mystic Station Redevelopment Project, Everett, Massachusetts**

Project manager for the comprehensive environmental licensing of a 1,600-MW natural gas-fired combined-cycle electric generating facility at Mystic Station. Responsible for the preparation of the MEPA Environmental Impact Report, Energy Facilities Siting Board Petition, air, wastewater, and wetlands permit applications, Coastal Zone Management consistency determination, and Chapter 91 waterways license application. Provided expert witness testimony before the Energy Facilities Siting Board.

**U.S. Generating Company, Millennium Power, Charlton, Massachusetts**

Project manager for the comprehensive environmental licensing of a 360-MW natural gas-fired combined-cycle electric generating facility. Responsible for preparation of the MEPA Environmental Impact Report, Energy Facilities Siting Board Petition and air, wastewater and wetlands permit applications. The project also entailed an innovative vernal pool construction demonstration project as mitigation for the project's proximity to protected salamander species habitat. Provided expert witness testimony before the Energy Facilities Siting Board.

**Sithe New England, Fore River Station, Weymouth, Massachusetts**

Provided expert witness testimony before the Energy Facilities Siting Board on site selection and air quality impacts of a proposed 800-MW dual-fueled combined-cycle electric generating facility. Prepared multiple Notices of Project Change throughout the construction process and negotiated favorable air permit modification following plant commissioning. Provided expert witness testimony before the Energy Facilities Siting Board.

**American National Power Generating Facility, Bellingham, Massachusetts**

Officer-in-Charge for the siting and comprehensive environmental licensing of a 580-MW natural gas-fired combined-cycle electric generating facility in Bellingham, Massachusetts. Key activities included preparation of the MEPA Environmental Impact Report, Energy Facilities Siting Board Petition, air and wetland permit applications. Provided expert witness testimony before the Energy Facilities Siting Board.

**American National Power Generating Facility, Blackstone, Massachusetts**

Officer-in-Charge for the siting and comprehensive licensing of a 580-MW natural gas-fired combined-cycle electric generating facility in Blackstone, Massachusetts. Key activities included preparation of the MEPA Environmental Impact Report, Energy Facilities Siting Board Petition, air and wetland permit applications. Provided expert witness testimony before the Energy Facilities Siting Board.

**Sithe New England, Medway Station Expansion Project, Medway, Massachusetts**

Officer-in-Charge for the comprehensive environmental licensing of a proposed 540-MW natural gas-fired simple-cycle peak electric generating facility at the existing West Medway Station. Provided expert witness testimony before the Energy Facilities Siting Board.

**PDC El Paso, Berkshire Power, Agawam, Massachusetts**

Project manager for the siting and comprehensive environmental licensing of a 272-MW natural gas-fired combined-cycle electric generating facility. Key activities include implementation of an innovative site

selection process, preparation of the MEPA Environmental Impact Report, Energy Facilities Siting Board Petition and air, wastewater, and wetlands permit applications. Provided expert witness testimony before the Energy Facilities Siting Board.

**L'Energia Inc. Cogeneration Facility, Lowell, Massachusetts**

Principal-in-Charge for environmental permitting of an 85-MW dual-fueled cogeneration facility. Major issues included air quality, noise, and water consumption.

**Milford Power Generating Facility, Milford, Massachusetts**

Project manager for the comprehensive environmental licensing of a 146-MW natural gas-fired combined-cycle electric generating facility. Key activities included preparation of a MEPA Environmental Impact Report, Energy Facilities Siting Board Petition, air, water use and wastewater discharge permit applications. Major issues include impact of use of wastewater treatment plant effluent as cooling tower make-up, impacts to riverine ecology, noise impacts, wetlands crossings, and aesthetics. Provided expert witness testimony before the Energy Facilities Siting Board.

**International Power America, Milford Power Expansion Project, Milford, Massachusetts**

Project Manager for the comprehensive environmental licensing of a proposed addition of a 170-MW natural gas-fired combustion turbine to the existing Milford Power Generating Facility.

**Riverside Steam and Electric Company, Cogeneration Facility, Holyoke, Massachusetts**

Project Manager for the comprehensive licensing of an 80-MW coal-fired cogeneration facility. Key activities included preparation of the MEPA Environmental Impact Report, Prevention of Significant Deterioration (PSD) permit application, and zoning variance petition. Major issues included air quality, ash disposal, discharge of cooling water to the Connecticut River, noise and protection of endangered/special concern species, including the shortnose sturgeon.

**Harvard University, Blackstone Station, Cambridge, Massachusetts**

Project Manager for the comprehensive licensing of the Blackstone Station boiler replacement project. Blackstone Station provides steam for the Harvard University campus. Key activities related to securing modifications to the facility's air and NPDES permits, completing MEPA review, and securing modifications to the facility's Charles River consumptive water use approvals.

**Peabody Power, LLC, Peabody, Massachusetts**

Officer-in-charge for the comprehensive licensing of a 99-MW natural gas-fired simple-cycle peak electric generating facility. Key activities included preparation of the MEPA Environmental Notification Form, air and wetland permit applications.

**Advanced Power North America, Cricket Valley Energy, Dover, New York.**

Project manager for the State Environmental Quality Review (SEQR) and comprehensive environmental licensing of a proposed 1,000-MW natural gas-fired combined-cycle electric generating facility in Dutchess County, New York. Key licensing issues included issues surrounding reuse of an abandoned industrial site, developing new procedures and software to process raw Automated Surface Observation System (ASOS) meteorological data for use in dispersion modeling, cumulative interactive source modeling for PM<sub>2.5</sub> and NO<sub>2</sub>, development of a network of onsite bedrock aquifer water supply wells, protected species habitat surveys, and restoration of impaired wetlands. Provided expert testimony before the New York State Department of Environmental Conservation and supported numerous community outreach public workshops.

**New York State Electric and Gas, Milliken Station Clean Coal Technology Demonstration Project, Lansing, New York**

Project manager for environmental licensing support for the Milliken Station Clean Coal Technology Program (CCT-IV) Demonstration Project. Project entailed installation of innovative flue gas desulfurization equipment and associated power plant modifications at NYSEG's 317-MW coal-fired power plant. Responsible for DOE-NEPA submittals and comprehensive environmental licensing. Provided expert witness testimony before the New York State Department of Environmental Conservation and the Tompkins County Environmental Commission.

**Sithe Energies, Inc., Heritage Station, Oswego, New York**

Officer-in-Charge for Article X Application and comprehensive environmental licensing of a proposed 800-MW natural gas-fired combined-cycle electric generating facility adjacent to the existing Independence Station, near Oswego, New York.

**Calpine Eastern, Wawayanda Energy Center, Wawayanda, New York**

Project Director for Article X Application and comprehensive environmental licensing of a proposed 540-MW natural gas-fired combined-cycle electric generating facility in Wawayanda, New York.

**U.S. Generating Company, Generating Facility Walkill, New York**

Principal-in-Charge for the comprehensive environmental licensing of a 150-MW natural gas-fired combined-cycle electric generating facility. Key activities include preparation of an environmental impact statement and water quality and air permit applications.

**New England Power and Narragansett Electric Company, Manchester Street Station, Providence, Rhode Island**

Project manager for environmental licensing of the 450-MW dual-fueled combined-cycle Manchester Street Station Repowering Project and associated underground transmission facilities in Providence, Rhode Island. Key activities included preparation of an environmental assessment to support Energy Facilities Siting Board and Coastal Resources Management Council license applications, air quality permitting, wetlands permitting and an 18-month estuarine quality and ecological sampling effort to support RIPDES permitting, including Clean Water Act Section 316(a) and (b) demonstrations. Provided expert witness testimony before the Energy Facility Siting Board.

**Bayonne Energy Center II, Bayonne, New Jersey**

Project manager for the comprehensive environmental licensing of a 130-MW expansion of the 512-MW Bayonne Energy Center, a dual-fueled simple-cycle peak electric generating station in Bayonne, New Jersey. Permitting requirements include Preconstruction and Title V Operating Permit Significant Modification, Waterfront Development Permit, Flood Hazard Permit, and Redevelopment Plan approvals.

**Hess Corporation, Newark Energy Center, Newark, New Jersey**

Project manager for the comprehensive environmental licensing of a proposed 650-MW dual-fueled combined-cycle electric generating facility at the existing Hess Oil Terminal in Newark, New Jersey. The project includes reuse of an inactive oil pipeline for a 345-kilovolt (kV) electric transmission interconnection to the Essex Substation. Key licensing issues surround the area's nonattainment status for PM<sub>2.5</sub> and close proximity to the Newark Liberty Airport as well as designated Environmental Justice communities. Directed air quality engineering and modeling as well as an economic dispatch/emissions displacement and air quality benefit analysis; environmental justice analysis and plan; Wastewater Treatment Works Approval and Significant Industrial User permit applications; New Jersey Land Use Regulatory Program Flood Hazard Permit, Freshwater Wetlands Permit, and Waterfront Development Permit application packages. Directed comprehensive geotechnical investigations of alternate on-land

and underwater electric transmission route alternatives, including an in-water geotechnical boring program in the Passaic River. Provided expert witness testimony before several regulatory agencies and supported community interaction programs including participation in open houses and stakeholder meetings.

**Pure Energy Resources, Bayonne Energy Center, Bayonne, New Jersey**

Strategic direction of air quality permitting of a proposed 512-MW dual-fueled simple-cycle peak electric generating facility in Bayonne, New Jersey. Key permitting issues included use of simple-cycle technology in New Jersey to meet mid-merit New York City electrical demand, interstate air quality transport, and compliance with evolving PM<sub>2.5</sub> nonattainment area rules. Provided expert witness testimony before the Bayonne Planning Board.

**Confidential Client, Thorofare, New Jersey**

Directed critical flaw assessment and licensing strategy development for a proposed coal-fired cogeneration facility.

**Competitive Power Ventures, Smyth County, Virginia**

Project manager for the comprehensive environmental permitting of a proposed 700-MW natural gas-fired combined-cycle electric generating facility in Smyth County, Virginia. Project approvals include State Corporation Commission Certificate of Public Convenience and Necessity and air, wetlands, and wastewater discharge permits. Major issues surround collection of onsite meteorological data and modeling in complex terrain, proximity to the Appalachian Trail and location upstream of protected species habitat.

**Competitive Power Ventures, CPV Warren Power Generating Facility, Warren County, Virginia**

Principal-in-Charge for the comprehensive permitting of a 520-MW natural gas-fired combined-cycle electric generating facility in Warren County, Virginia. Key licensing issues surrounded impacts to the Shenandoah National Park. Provided expert witness testimony before the Virginia State Corporations Commission.

**Competitive Power Ventures, CPV Cunningham Creek Power Generating Facility, Fluvanna County, Virginia**

Principal-in-Charge for the comprehensive permitting of a 520-MW natural gas-fired combined-cycle electric generating facility in Fluvanna County, Virginia. Key licensing issues included cumulative impacts of all newly proposed power projects in Virginia. Provided expert witness testimony before the Virginia State Corporations Commission.

**North America Power Development, Oregon, Ohio**

Senior Technical Advisor for the comprehensive environmental permitting of a proposed 800-MW natural gas-fired combined-cycle electric generating facility in Oregon, Ohio. Project approvals include Ohio Power Siting Board Certification and a Prevention of Significant Deterioration Preconstruction Permit from the Ohio Environmental Protection Agency.

**Advanced Power North America, Carroll County, Ohio**

Senior Technical Advisor for the comprehensive environmental permitting of a proposed 700-MW natural gas-fired combined-cycle electric generating facility in Carroll County, Ohio. Project approvals include Ohio Power Siting Board Certification and a Prevention of Significant Deterioration Preconstruction Permit from the Ohio Environmental Protection Agency.

**Clean Energy Future, Lordstown Energy Center, Trumbull County, Ohio**

Senior Technical Advisor for the comprehensive environmental permitting of a proposed 940-MW natural gas-fired combined-cycle electric generating facility in Trumbull County, Ohio. Project approvals

include Ohio Power Siting Board Certification and a Prevention of Significant Deterioration Preconstruction Permit from the Ohio Environmental Protection Agency.

**American Electric Power, Ohio and West Virginia**

Principal-in-Charge for comprehensive air quality impact analyses for proposed coal-fired Integrated Gasification Combined Cycle (IGCC) plants in Ohio and West Virginia.

**Competitive Power Ventures, CPV Pierce Power Generating Facility, Polk County, Florida**

Principal-in-Charge for the comprehensive permitting of a 250-MW natural gas-fired combined-cycle electric generating facility in Polk County, Florida. Provided expert witness testimony before the Board of County Commissioners.

**Competitive Power Ventures, CPV Gulfcoast Power Generating Facility, Manatee County, Florida**

Principal-in-Charge for the PSD permitting of a 250-MW natural gas-fired combined-cycle electric generating facility in Manatee County, Florida.

**Competitive Power Ventures, CPV Cana Power Generating Facility, St. Lucie County, Florida**

Principal-in-Charge for the PSD permitting of a 250-MW natural gas-fired combined-cycle electric generating facility in St. Lucie County, Florida.

**Merchant Energy Group of the Americas, Washington**

Principal-in-Charge for the comprehensive licensing of a natural gas-fired simple-cycle peak electric generating facility near Puget Sound, Washington.

***Transactional Due Diligence Experience*****Goldman, Sachs and Company, USA and the Dominican Republic**

Directed the environmental due diligence to support the successful acquisition of the Cogentrix assets, including 26 power plants, representing over 3,300 MW across the United States and the Dominican Republic. The operating facilities included stoker, pulverized and waste coal-fired plants as well as natural gas-fired combined cycle plants.

**Goldman, Sachs, and Company, Colorado, Florida, Massachusetts, New Jersey, New York and Pennsylvania**

Environmental due diligence assessment to support the successful acquisition of the National Energy & Gas Transmission Independent Power Producer portfolio, including coal, natural gas, and wind power electric generating facilities.

**Energy East, New York**

Directed the environmental due diligence to support Energy East's successful acquisition of Rochester Gas & Electric, including its coal, oil, gas, nuclear and hydroelectric generating assets, 149 distribution substations, 23 transmission substations, gas distribution system, pipeline terminals and a 10-story office building.

**Confidential Client, New York**

Directed an environmental due diligence assessment of the Central Hudson generating assets in New York, including the coal-fired Danskammer Station and the oil-fired Roseton Station along the Hudson River.

**Confidential Client, New York**

Directed an environmental due diligence assessment of the New York State Electric and Gas generating assets in New York, including six coal-fired power plants, two ash landfills and a wet chemistry laboratory.

**U.S. Generating Company, Massachusetts and New York**

Directed the environmental due diligence to support USGen's acquisition of J. Makowski, including natural gas-fired assets in Massachusetts (Masspower and Pittsfield) and New York (Selkirk).

**Energy Capital Partners, New Jersey**

Directed transactional due diligence in support of the successful acquisition of due diligence assistance with respect to the potential acquisition of AES Red Oak Generating Station, an 832 MW natural gas-fired combined cycle power plant located in Sayreville, New Jersey.

**Energy Capital Partners, North Carolina**

Directed transactional due diligence in support of the successful acquisition of CoaLogix Inc., a company that provides Selective Catalytic Reduction (SCR) catalyst management and regeneration services for coal-fired power plants.

**Energy Capital Partners, Massachusetts and Illinois**

Directed transactional due diligence in support of the successful acquisition of the coal-fired Brayton Point Station in Somerset, Massachusetts and Kincaid Power Station in Kincaid, Illinois as well as the natural gas-fired Elwood Generating Station in Elwood, Illinois.

**Energy Capital Partners, Texas**

Directed transactional due diligence in support of the successful acquisition of acquisition of the Odessa Ector Generating Station, a 1,000 MW natural gas- and oil-fired combined cycle power plant in Ector County, Texas.

**Energias de Portugal, USA**

Transactional due diligence support for the successful acquisition of Horizon Wind Energy's development portfolio. Developed and implemented a valuation strategy for a portfolio of projects in various stages of development taking into consideration wind resource and production potential, environmental setting, permitting progress, community receptivity, market and renewable portfolio standard robustness, and proposed technology.

**Capital Power Corporation, Maine**

Transactional due diligence support for the successful acquisition of the 265-MW Rumford Power Project.

**Capital Power Corporation, Rhode Island**

Transactional due diligence support for the successful acquisition of the 265-MW Tiverton Power Project.

**Capital Power Corporation, Connecticut**

Transactional due diligence support for the successful acquisition of the 500-MW Bridgeport Energy Project.

**Edison Mission Energy, Homer City, Pennsylvania**

Directed the environmental due diligence to support the successful acquisition of the 1,880-MW coal-fired Homer City Station in Homer City, Pennsylvania.

**American National Power, Milford, Massachusetts**

Directed the environmental due diligence to support the successful acquisition of the Milford Power generating station in Milford, Massachusetts.

**U.S. Generating Company, Connecticut, Massachusetts and Rhode Island**

Environmental due diligence to support the successful acquisition of the New England Electric generating assets, including two coal-fired generating plants, Salem Harbor Station and Brayton Point Station in Massachusetts, and the natural gas-fired Manchester Street Station in Rhode Island, as well as the Connecticut and Deerfield River hydroelectric assets.

**Harvard University, Cambridge, Massachusetts**

Directed the environmental due diligence to support the successful acquisition of Blackstone Station, an oil- and gas-fired steam electric plant on the Charles River in Cambridge, Massachusetts.

**Confidential Client, USA**

Directed a comprehensive due diligence assessment in support of the potential acquisition of the Infigen Energy U.S. assets. The target assets included 18 wind farms located in California, Colorado, Illinois, New Mexico, New Jersey, Oklahoma, Oregon, Pennsylvania, and Texas.

**Confidential Client, Texas**

Directed an environmental due diligence assessment of the 630 MW coal-fired Coletto Creek Power Station in Goliad County Texas.

**Confidential Client, Massachusetts**

Directed a due diligence assessment in support of potential investment in a deepwater offshore wind energy project proposed to be located off the coast of Massachusetts. The analysis took into account wind resource assessment, turbine and floating platform technology feasibility, transmission interconnection feasibility and cost, and permitting feasibility, schedule and cost.

**U.S. Generating Company, Florida**

Directed the environmental due diligence to support investment in two bagasse-fired cogeneration plants in Florida.

**Confidential Client, Maryland, Massachusetts, New Hampshire, and New Jersey**

Directed an environmental due diligence assessment for the potential acquisition of Consolidated Edison Development, Inc. generating assets.

**Confidential Client, Maryland, New Jersey and Pennsylvania**

Directed an environmental due diligence assessment of the GPU assets, consisting of 20 generating stations, including coal, oil, gas and hydroelectric generating stations, an ash landfill, and several development sites (42 properties total) in Pennsylvania, New Jersey and Maryland.

**Confidential Client, Waterbury, Connecticut**

Environmental site assessment to support transactional due diligence of a proposed power plant development project in Waterbury, Connecticut.

**Confidential Client, Massachusetts**

Directed an environmental due diligence assessment of Mount Tom Generating Station, a 147 MW coal-fired power plant in Holyoke, Massachusetts.

**Confidential Client, Pennsylvania and Ohio**

Directed an environmental due diligence assessment of the Duquesne Power and Light generating assets, including seven power plants and three ash landfills in Pennsylvania and Ohio.

**Confidential Client, Oregon and Montana**

Environmental due diligence assessment of the Portland General Electric assets, including its hydroelectric, natural gas/oil, and coal facilities, as well as a nuclear plant in transition to decommissioning and 26,000 miles of electric transmission and distribution lines.

Confidential Client, West Virginia. Directed an environmental due diligence assessment of a waste-coal fired power plant in West Virginia.

**Confidential Client, South Carolina**

Directed an environmental due diligence assessment of a cogeneration facility at a paper mill in South Carolina.

**Confidential Client, Massachusetts**

Environmental due diligence assessment of the Boston Edison generating assets in Massachusetts, including the oil and gas-fired Mystic Station, the oil-fired Medway turbines, and the former Edgar Station site.

**Waste-to-Energy Facility Permitting Experience****Ogden Martin Systems, Resource Recovery Facility, Montgomery County, Maryland**

Project manager for environmental permitting of a 1,800-tpd resource recovery facility and associated transfer station. Regional permits include solid waste management, wetlands, water appropriation, NPDES, and cultural resources and endangered species reviews.

**Wheelabrator Environmental Systems, Inc., Waste-to-Energy Facility, Peekskill, New York**

Officer-in-Charge for the comprehensive licensing of retrofits to the Charles Point Resource Recovery Facility in Westchester County, New York.

**Wheelabrator Environmental Systems, Inc., Waste-to-Energy Facility, Alabama, New York**

Project manager for final site selection, air quality impact analysis, and state environmental quality review (SEQR) licensing of a proposed 1,500-tpd regional waste-to-energy facility.

**Warren Energy Resource Company, NOx RACT Plan, New Jersey**

Project manager for development of a NOx RACT plan for a 400-tpd resource recovery facility.

**American Ref-Fuel, Integrated Solid Waste Management Facility, Green Island, New York**

Project manager for a comprehensive environmental assessment of a 1,500-tpd resource recovery facility and 300 ton per day materials recycling facility.

**Ogden Martin Systems, NOx RACT Plan, Lancaster County, Pennsylvania**

Project manager for development of a NOx Reasonably Available Control Technology (RACT) plan for a 1,200-tpd resource recovery facility.

**Cogentrix, Inc., Waste-fired Power Plant, Portsmouth, Virginia**

Project manager for environmental permitting of a 1,150-tpd municipal waste-fired power plant.

**Old State Management Corporation, Lancaster, Massachusetts, Resource Recovery Facility**

Project manager for EIR and environmental permitting for the North County Resource Recovery Facility. Project would combust 800 tons per day of municipal solid waste and recycle 150 tons per day of aluminum, ferrous materials, cardboard and plastics, and compost yard wastes.

**Catalyst Waste-to-Energy Corporation, Resource Recovery Facility, Massachusetts**

Site evaluation and feasibility assessment for a proposed resource recovery facility in southeastern Massachusetts.

**American Ref-Fuel, Co-disposal Facility, Pennsylvania**

Provided technical support in several areas for preparing permit application for the Lehigh Valley Waste-to-Energy Co-disposal Facility. The facility was proposed to accept 1,000 tons per day of municipal solid waste and 260 tons per day of sewage sludge cake.

**Power Recovery Systems, Resource Recovery Facility, Quincy, Massachusetts**

Managed EIR for a 400-tpd waste-to-energy facility. Major issues included air quality, ash disposal, wetlands, protection of endangered species, proximity of the proposed facility to the Blue Hills Reservation, and noise. Represented client at meetings with various regulatory agencies.

**BioMedical Waste Systems, Processing Facility, Chelsea, Massachusetts**

Principal-in-charge for comprehensive licensing of prototypical biomedical waste processing facility in Massachusetts. Key permit requirements included site assignment waiver, solid waste management facility permit and Department of Health approval.

**BioSafe, Inc., Biomedical Waste Incinerator, Concord, New Hampshire**

Directed critical flaw assessment and permit strategy development for proposed biomedical waste incinerator.

***Air Quality Studies Experience*****U.S. Department of Energy, Acid Rain Information Book**

Contributing author of the Acid Rain Information Book-Second Edition. Lead author of chapter on monitoring programs and results.

**National Commission on Air Quality, Air Quality Modeling**

Conducted regional scale air quality modeling analyses covering the New York, New Jersey, and Connecticut area for SO<sub>2</sub> TSP, and NO<sub>x</sub>. Evaluated several fuel switching and energy conservation scenarios. Conducted a critical review of the emissions/air quality portions of State Implementation Plans.

**U.S. Environmental Protection Agency, Emission Inventories**

Directed several emissions inventory compilations to support regional scale Eulerian modeling. Directed the Northeast Corridor Regional Modeling Project Emissions Inventory and the 1980 National Acid Precipitation Assessment Program Eulerian Modeling Emissions Inventory efforts. Developed the Flexible Regional Emissions Data System (FREDS).

**Domino Sugar Corporation, NO<sub>x</sub> RACT Plan for Sugar Refinery, Brooklyn, New York**

Prepared NO<sub>x</sub> RACT plan for Domino Sugar's Brooklyn, New York refinery.

**Tennessee Valley Authority**

Project manager for independent external peer review of the 1985 National Acid Precipitation Assessment Program emissions inventory compilation efforts. Review focused on the adequacy of the emissions data to support applications for the regional acid deposition model.

**U.S. Environmental Protection Agency, Dioxin Study**

Modeled air transport of dioxin from contaminated network of unpaved roadways in Missouri as part of a health risk assessment. Developed modeling protocol for examination of dioxin-contaminated horse arena.

**U.S. Environmental Protection Agency, Stack Height Regulations**

Managed program for EPA's Control Programs Development Division to identify and evaluate sources affected by revisions to EPA's stack height regulations.

**U.S. Environmental Protection Agency, TSP Inventory**

Conducted micro-inventories of total suspended particulates to determine causes of non-attainment in the Steubenville, Ohio and Wheeling, West Virginia area.

**U.S. Environmental Protection Agency, Dispersion Modeling**

Conducted dispersion modeling analysis of air quality impacts of incineration of toxic waste in New Jersey.

**Shoppers World, Framingham, Massachusetts, Air Quality Analyses**

Managed mobile source air quality modeling analyses surrounding transportation system improvements associated with expansion of the mall.

**Phillips Academy, Massachusetts, Air Quality Analysis**

Directed air quality analyses resulting in favorable ruling pertaining to energy credits application. Key issues included combined impacts of nearby facilities and interstate transport.

**Ocean Spray Cranberries, Massachusetts, Air Quality Analysis**

Managed air quality analysis and prepared supporting documentation for permits to construct and operate an additional boiler. Represented client at meetings with regulatory agencies.

**Professional Affiliations**

President Emeritus, Northeast Energy and Commerce Association

Member, Environmental Business Council

# Killingly Engineering Associates

Civil Engineering & Surveying



P.O. Box 421 Dayville, CT 06241  
Phone: 860-779-3703  
Fax: 860-774-3703

**Normand Thibeault, Jr, P.E.**  
**LIC# PEN 0022834**

## ***PROFESSIONAL LICENSURE***

Connecticut – Licensed Professional Engineer

## ***PROFESSIONAL EXPERIENCE***

2007-present  
Principal/Partner  
Killingly Engineering Associates  
P.O. Box 421  
Dayville, CT 06241

2006 – 2007  
Senior Project Engineer  
Provost & Rovero Inc.  
57 East Main Street  
P.O. Box 191  
Plainfield, CT 06354

2004 -2006  
Senior Project Engineer  
CME Associates, Inc  
110 Broadway  
Norwich, CT 06360

1999 -2004  
Project Engineer  
CME Associates, Inc  
110 Broadway  
Norwich, CT 06360

1998-1999  
Staff Engineer  
Fuss & O'Neill  
Manchester, CT 06042

***EDUCATION***

Bachelor of Science – Civil and Environmental Engineering – University of Connecticut, 1998

Fundamental civil engineering program with environmental coursework including water & wastewater treatment, hydrology & fluid mechanics, environmental systems modeling, environmental toxicology & hazardous waste management.

***SKILLS***

AutoCad LDD and Civil 3D experience for 18+ years

HydroCAD Stormwater Modeling Software

HVAC-Calc Software

- Feasibility studies
- On-site septic system design
- Engineering assessments for land use optimization
- Subdivision planning and design
- Drainage studies & floodplain analysis
- Water quality engineering
- Storm water management/ pollution prevention plans (SWPPP)
- Detention & retention facilities
- Pond design
- Roadway, drainage and utilities design
- Construction plans and specifications
- Site Development plans
- Construction cost estimates
- Local, state & federal permitting

***PROJECT EXPERIENCE***

Mr. Thibeault has 18 years of continuous design experience and has been involved in a wide range of civil design projects from simple residential septic systems, structural analysis, and site development plans to complex site evaluation, design and layout. Projects include large multi-family residential developments, commercial developments, municipal roadway and utilities projects, Stormwater management plans & design. Mr. Thibeault's experience includes hydrologic and hydraulic analysis and design, site master planning and layout, road layout, utilities and drainage design, construction inspection & stormwater sampling, and regulatory and environmental permitting at the local through federal levels.

## **MAJOR PROJECTS**

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### *US Department of the Navy, New London, CT*

As a result of an act of congress, all branches of the US armed forces participated in a 10-year effort to privatize all military housing and relinquish management to an independent housing contractor and management operation. In conjunction with the Benham Companies based out of Oklahoma City, OK, Mr. Thibeault managed the redesign and redevelopment of military housing facilities in New London, CT as part of an \$850 million dollar east coast reconstruction effort. The design included the construction of over 400 housing units, roadway design and redesign, utilities installations, stormwater quality updates, acquisition of state and federal permits as well as coordination with the Benham Companies national management representatives in Oklahoma.

### *Franklin Hills Estates & Country Club, Franklin CT*

Course construction is currently underway and anticipated completion will be September 2018. Tasks for this project included grading, drainage & utilities design, access roadway & road for luxury villa development local permitting with the Town of Franklin, State and federal permitting with the Army Corps of Engineers as well as CTDEEP 401 Water Quality certification. Course is located at the headwaters of the Yantic River Watershed and consideration to construction stormwater management was critical to the design.

### *Matulaitis Nursing Home and Sisters of the Immaculate Convention, Putnam CT*

Due to persistent septic failures of on site sanitary disposal systems, Mr. Thibeault pursued and obtained applicable local and state permits to tie into the existing Town sanitary sewer system for these two facilities. The project included the design and installation of two separate pump stations, the installation of more than 3,000 linear feet of sanitary force main overland through wooded terrain and installation of over 2,000 linear feet of gravity sewer line. Other than the permitting and design, Mr. Thibeault was also responsible for contract documents, project bidding, awarding of the contract and construction inspection. The project was completed within 2 months from the start.

### *Norwich River, LLC, Norwich, CT*

The project included the design and permitting for nearly 300 condominium units along the Shetucket River in Norwich, CT. Mr. Thibeault was responsible for coordination of field survey work, site layout, hydrologic and hydraulic design of drainage systems and stormwater treatment systems, coordination with local utilities, CTDOT approvals and preparation of construction documents for this project. Phased construction continues currently.

### *Eric Carle Museum of Picture Book Art – Amherst, MA*

Founded in part by Eric Carle, the renowned author and illustrator of more than 70 books, including the 1969 classic *The Very Hungry Caterpillar*, The Eric Carle Museum of Picture Book Art is the first full-scale museum in this country devoted to national and international picture book art. Working with the architectural firm of Juster, Pope-Frazier, Mr. Thibeault was initially retained to acquire local permits, coordinate with utilities companies and design parking and drainage. Located in the center of a former apple orchard, it was later determined that the soils on site were contaminated above acceptable levels with lead and arsenic, constituents of pesticides banned in the 1960's. Mr. Thibeault worked with the contractor and state officials as construction continued to expedite testing, removal, and remediation of the contaminated soils without extending the timetable for completion of the project.

# PROFESSIONAL RESUME

*George T. Logan, M.S., PWS, CSE*

**Principal Environmental Scientist/Senior Ecologist**

## EDUCATION:

M.S. Natural Resources, *Wildlife Management & Conservation Biology*,  
University of Rhode Island, Kingston, R.I., 1989.

B.S. Natural Resources, *Wildlife Management & Wetlands Ecology*,  
University of Rhode Island, Kingston, R.I., 1986.

### *Continuing Education*

The Transportation Project Development Process: Training in the  
PennDOT Environmental Impact Statement Handbook, Harrisburg,  
PA, January 1994

Rapid Bioassessment Protocols of Aquatic Systems (EPA Protocols),  
Wetland Training Institute, Williamsport, PA, August 3-6, 1993

## CERTIFICATIONS: (current)

Certified Senior Ecologist (2014) - The Ecological Society of America  
Certified Professional Wetland Scientist (No. 581) (1994) - Society of  
Wetland Scientists

Registered Soil Scientist (1989) - Society of Soil Scientists of Southern  
New England

Certified Associate Wildlife Biologist (1989) - The Wildlife Society

## EXPERIENCE:

Mr. Logan is the Co-Owner and *Principal Environmental Scientist* and *Senior Ecologist* for Rema Ecological Services, LLC. He specializes in tidal and inland wetland delineations and evaluation, permitting, wetland mitigation design, implementation and monitoring, and the preparation of environmental compliance documents in accordance with national (NEPA), state (e.g., CEPA, MEPA), and local criteria and guidelines. He also provides design, construction supervision and implementation for a wide variety of habitat restoration and enhancement projects. Mr. Logan performs watershed-wide and surface water quality evaluations and provides guidance in the design of stormwater Best Management Practices (BMPs), including stormwater wetlands and bioretention basins, as well as for LID (low impact development) practices.

Mr. Logan has 28 years of experience as a wildlife biologist/ecologist conducting wildlife habitat evaluations and focused avian, mammalian, invertebrate, and herpetofaunal surveys using both active and passive methods. He frequently conducts targeted surveys for sensitive, rare, and "listed" species (i.e. endangered, threatened, special concern), and aquatic biosurveys to assess the biodiversity and biotic health of ponds, lakes, vernal pools, rivers, and streams. Mr. Logan has extensive experience in performing herpetological surveys, including over 200 vernal pool investigations and evaluations.

Mr. Logan has participated in nearly 2,400 individual projects in New England and the Mid-Atlantic States and in 158 of 169 municipalities in Connecticut.



## Professional Resume: *(continued)*

*George T. Logan, MS, PWS, CSE*

### PROFESSIONAL AFFILIATIONS:

Society of Soil Scientists of Southern New England  
Society of Wetland Scientists  
Association of Massachusetts Wetland Scientists  
Ecological Society of America  
The American Birding Association  
The Wildlife Society  
Soil & Water Conservation Society  
Connecticut Association of Wetland Scientists (CAWS) (*Past-President, Charter member*)

### PUBLICATIONS: *(selected)*

Logan, G.T. & S.N. Gadwa. 1999. Quinnipiac River Watershed Association Stream Study. Water Quality in the Quinnipiac River. Proceedings of a Symposium on the Impact of Nonpoint Source Pollution in the Quinnipiac River Watershed, pp. 66-70.

Logan, G.T. & S.N. Gadwa. 1998. Stream Biosurveys: *A Primer*. Quinnipiac River Watershed Association Educational Series for the Adopt-the-River Programs.

Pawlak, E.M. & G.T. Logan. 1996. Town of Cromwell Wetland Evaluation Project. Connecticut Association of Conservation and Inland Wetlands Commissions. *The Habitat*, Vol. 10:1

Logan, G.T., F.B. Titlow & D.G. Schall. 1995. The Scientific Basis for Protecting Buffer Zones. Proceedings of the 16th Annual Meeting of the Society of Wetland Scientists.

Pawlak, E.M. & G.T. Logan. 1995. Town of Cromwell Wetland Buffer Zone Designation Methodology. Proceedings of the 16th Annual Meeting of the Society of Wetland Scientists.

Logan, G.T., J.H. Brown, Jr., T.P. Husband & M.C. Nicholson. 1994. Conservation Biology of the Cretan Agrimi (*Capra aegagrus cretensis*). *Biologia Gallo-Hellenica*, Vol. 21, pp. 51-57.

Nicholson, M.C., T.P. Husband, J.H. Brown, Jr. and G.T. Logan. 1994. Implications of behavior on the management of the Cretan Agrimi (*Capra aegagrus cretensis*). *Biologia Gallo-Hellenica*, Vol. 21, pp. 45-50.

### WORKSHOPS & CONFERENCES: *(selected)*

Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region. Corps Training Workshop. May 2011. (*sponsor, participant*)

Vernal Pools: *The Jewels of the Forest*. Technical Workshop for the Town of Southwick Conservation Commission. January 2005. (*Guest Lecturer*)

## Professional Resume: *(continued)*

*George T. Logan, MS, PWS, CSE*

### **WORKSHOPS & CONFERENCES:** *(selected)*

The Importance of Habitat Edges. Riverside Landscaping Conference. The Rivers Alliance of Connecticut. June 1998. *(Guest Lecturer)*

Riparian Buffer Function, Performance & Limitations. Urban Riparian Buffers Conference & Technical Training Session. April 1999. *(Guest Lecturer)*

Sedimentation and Erosion Control Review Session. USDA. Natural Resource Conservation Service and CPESC (Certified Professionals in Erosion Control), Concord, NH. September 2001.

Buffer Strips as Storm Water Quality Controls. EnviroExpo, Boston. May 1999. *(Guest Speaker)*

Identifying Wetland Soils, Fauna and Flora. Municipal Inland Wetland Staff Technical Workshops. June 1999. *(Guest Speaker)*

Water Quality in the Quinnipiac River: A Symposium on the Impact of Non Point Source Pollution in the Quinnipiac River Watershed. November 1998. *(Presenter)*

Our Hidden Wetlands: Vernal Pools in Connecticut. Co-sponsored by CT DEP and the Center for Coastal and Watershed Systems. November 1997 and January 1998 *(Workshop Leader)*

Aquatic Invertebrate & Stream Ecology Workshop. Quinnipiac River Watershed Association Workshop Series. September 1997, May 1998, June 1999, January 2000 *(Workshop Leader)*

The Massachusetts Association of Conservation Commissions Third Annual Conference: Wetland Buffer Zones, March 1996 *(Guest Lecturer)*

16th Annual Conference of the Society of Wetland Scientists: Wetland Understanding, Wetland Education, May 1995 *(Presenter)*

Quinnipiac River Watershed Association Forum on Non-Point Pollution: Significance of Wetlands and Wetland Buffers, October 1992 *(Guest Lecturer)*

The Massachusetts Association of Conservation Commissions Second Annual Conference, April 1995 *(Guest Lecturer)*

The Society of Soil Scientists of Southern New England Riparian Buffer Zone Conference, November 1994 *(Presenter)*

## Professional Resume: *(continued)*

*George T. Logan, MS, PWS, CSE*

### SUPPLEMENTARY INFORMATION:

1996 to present

#### **Rema Ecological Services, LLC**

##### **Principal Environmental Scientist/Ecologist, Co-Owner**

- Founded the company to provide natural resources management, environmental planning, compliance and permitting services, and client advocacy throughout the Northeast.
- Has participated in over 1,900 individual projects since the company's inception, including five gas-fired, combined-cycle power plant projects, numerous municipal projects, including over 20 new schools, several higher education projects, numerous wetland replacement projects, several new golf courses, and many large residential, industrial and commercial endeavors.
- Was the Interim Environmental Planner for the Town of Waterford, Connecticut, during a ten-month tenure. Responsibilities included providing procedural and technical support to the town's Conservation Commission (a.k.a. Inland Wetlands and Watercourses Agency), and working closely with Planning Department staff.

1994 to 1996

#### **Fugro East, Inc. *(Currently AECOM)***

##### **Senior Project Manager/Environmental Scientist**

- Office Manager for the firm's Connecticut office, responsible for day-to-day operations, marketing, and business development.
- Wetland delineations in accordance with state and federal criteria.
- Natural resource inventories of upland, wetland and aquatic ecosystems, specializing in wildlife habitat assessments.
- Preparation of environmental compliance documentation for over 100 projects including large-scale commercial development.

1993 to 1994

#### **A.D. Marble & Company, Inc.**

##### **Senior Environmental Planner/Wildlife Biologist**

- Participated in the management of major transportation improvement projects and in the preparation of environmental documents in accordance with the National Environmental Policy Act (NEPA) while continuing involvement in the collection of baseline field data.
- Application of the Pennsylvania Department of Environmental Resources (PADER) hierarchical methodology for the selection of suitable wetland replacement sites.
- Field verification of Threatened, Endangered or Special Concern species listed by the Pennsylvania Game Commission.
- Wetland boundary identification in accordance with the unified PADER and U.S. Army Corps of Engineers (USACOE) methodology.
- Participated in nearly 30 projects, mostly for major transportation corridors, such as the rehabilitation of the I-95 corridor in PA.

## Professional Resume: *(continued)*

*George T. Logan, MS, PWS, CSE*

### SUPPLEMENTARY INFORMATION *(continued)*:

1989 to 1993

#### **Soil Science & Environmental Services, Inc. Wildlife Biologist-Ecologist & Soil Scientist**

- Project Manager responsible for field operations and report preparation for nearly 300 individual projects in over 75 towns in New England, including one town-wide wetland mapping, inventory and evaluation project (Town of Cromwell).
- Wetland boundary delineation according to state and federal criteria (e.g., Connecticut and Massachusetts Statutes, U.S. Army Corps of Engineers methodologies).
- Ecosystem analyses and biological inventories of upland areas, tidal and inland wetlands, estuaries, streams, rivers, ponds and lakes.
- Environmental impact evaluations, including site plan review, analyses of proposed impacts and design of mitigation strategies.
- Local, state and federal permitting for impacts to natural resources, including wetlands.
- Implementation of water quality monitoring programs for streams and rivers.
- Design, construction supervision, and monitoring of wetland enhancement, restoration and creation.
- Aquatic biosurveys of streams and rivers utilizing standardized methods (e.g. EPA Rapid Bioassessment Protocols).
- Detailed faunal surveys and censuses using both active and passive methods (e.g. direct and indirect observation, live-trapping, point count avian censuses, pellet counts, etc.).
- Expert witness testimony for court and administrative proceedings.

1988 to 1989

#### **Independent Contracts Soil & Wetland Scientist**

- *Summer of 1988*: Was hired by the Town of Canton, CT to identify, inventory, and evaluate wetlands and watercourses within the entire municipality. Was responsible for amending the municipality's *Official Wetland and Watercourses Map*.
- *Spring of 1988*: Was hired by the Connecticut Chapter of the Nature Conservancy to determine and report on the historic expansion of invasive plants (*Phragmites australis*, *Lythrum salicaria*) on eight TWC preserves. Scope included site visits, remote sensing using archived aerial photographs, and report.

### TECHNICAL REPORTS:

Mr. Logan has completed several hundred comprehensive studies (e.g. Wetlands Assessments, Ecological Evaluations, Environmental Impact Analyses/Statements, Vernal Pool Investigations, Listed-Species Surveys & Management Plans, aquatic vegetation surveys, and a variety of other specialized studies. A representative list of these technical reports can be provided upon request.

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## Ethan Paterno

## Managing Consultant

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Mr. Paterno is a North American power market forecasting and analytics expert with over 10 years of experience in the energy industry. Mr. Paterno helps clients understand and quantify the impact of commodity, market structure and regulatory changes on long-term electricity and capacity prices. His work has supported clients in the development, purchase, sale and merger of power plants across North America. Mr. Paterno holds a M.S. in Mineral Economics from the Colorado School of Mines, and a B.A. in Economics from the University of New Hampshire.

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Primary expertise	Related experience	Qualifications	Client list
<ul style="list-style-type: none"><li>• Power market forecasting &amp; analytics</li><li>• Transaction support</li></ul>	<ul style="list-style-type: none"><li>• Energy asset valuation</li><li>• Financial modeling</li></ul>	<ul style="list-style-type: none"><li>• M.S. Mineral Economics, Colorado School of Mines</li><li>• B.A. Economics, University of New Hampshire</li></ul>	<ul style="list-style-type: none"><li>• Power producers &amp; developers</li><li>• Electric utilities</li></ul>

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### Primary expertise

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**Power market forecasting & analytics** – Mr. Paterno helps clients navigate the investment risks and opportunities of the North American power markets and capitalize on changes in market structure, regulatory policy, and commodity price movements. He has led the development of market price forecasts for power markets across the U.S., including ISO-NE, in connection with the development, purchase, sale and merger of conventional and renewable generation power plants.

**Transaction support** – Mr. Paterno has helped his clients with the purchase and sale of more than 50,000 MW of power plants across the U.S. These transactions have covered nearly every U.S. power market, and included all types of power generation – coal, hydro natural gas, oil, nuclear, wind and solar.

### Key client achievements

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**Power producer** – Mr. Paterno led the project team that helped a solar-focused renewable generation company acquire a wind-focused renewable generation company. As part of its work, PA developed market price forecasts for the Northeast U.S., including ISO-NE, and helped the client identify the risks and opportunities in the target company's portfolio of existing and development power plants. Through PA's support, the client was able to successfully acquire the company.

**Confidential client** – Mr. Paterno led the project team that helped a confidential client acquire a tax equity position in a U.S. wind generation portfolio. As part of its work, PA developed market price forecasts for the Northeast U.S., including ISO-NE, and helped the client identify the risks and opportunities in the portfolio. Through PA's support, the client was able to successfully complete the transaction.

**Electric utility** – Mr. Paterno led the project team that supported the sale of a 5,000 MW portfolio of coal and natural gas-fired power plants in the Midwestern U.S. As part of its work, PA provided a market price forecast for the PJM power market and drafted an independent energy market expert report. Through PA's support, the client was able to complete the sale of the portfolio.

**Power producer** – Mr. Paterno led the project team that supported the financing of a biomass power plant in ISO-NE. As part of its work, PA helped the client analyze different liquidated damages scenarios under the proposed power contract in order to assess potential cash flow issues. Additionally, PA prepared a report that outlined the methodology and findings of its analysis, which was used educate lenders on the risks associated with the power contract. Through PA's support, the client was able to close financing.

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## **Additional experience**

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**Power producer** – Mr. Paterno led the project team that helped a renewable generation company acquire a 1,000 MW portfolio of wind generation located in the Northwest U.S. As part of its work, PA provided a market price forecast for the WECC power market and drafted a presentation describing the investment risks and opportunities of the portfolio. Through PA's support, the client was able to successfully acquire the portfolio.

**Electric utility** – Mr. Paterno led the project team that supported an electric utility in a contract dispute with a local municipality. As part of its work, PA drafted expert witness testimony, which included a detailed audit of historical customer bills between the client and the municipality. Through PA's support, the case was settled out of court.

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## Mason Smith

## Managing Consultant



Mason has more than 10 years of experience as a consultant involved in generation and transmission asset valuation and power market analysis, with a focus on policy and economics. Mason has delivered comprehensive reports on U.S. and international power markets, with a focusing on economic and regulatory drivers and their impacts on power generation and transmission assets. Mason has led input-output analyses to assess the economic impact associated with generation facilities and has evaluated the cost and benefits associated with investments in a range of energy assets and programs. Mason has an MBA and a Master of Environmental Management from Yale University.

### Primary expertise

- Electricity market economics
- Economic impact analysis

### Related experience

- Generation planning
- Financial analysis

### Qualifications

- MBA, Finance and Strategy, Yale University
- Master of Environmental Mgmt, Policy, Economics, & Law Track with Energy Focus, Yale University

### Client list

- Power producers and developers
- Electric utilities

### Primary expertise

**Electricity market economics** – Working on behalf of utilities, generation owners, and prospective transmission developers, Mason has analyzed electricity rate impacts and plant gross margin impacts associated with proposed investments, potential policy developments, and major infrastructure changes, among others.

**Economic impact analysis** – Mason has led input-output analyses to analyze the economic impact associated with generation facilities and has evaluated the costs and benefits associated with investments in a range of energy assets and programs.

### Key client achievements

**Independent Power Producer** – Mason led the evaluation of the cost savings to customers as well as the economic development benefits of the construction and operation of a 1,000 MW combined cycle generation facility in the New England power market. PA employed input-output models, including IMPLAN and the Jobs & Economic Development Impact (JEDI) model, to estimate the in-state jobs, income, and economic output resulting from the facility's construction and operation.

**Municipal Utility** – Mason helped a utility analyze the economic development considerations associated with utility power procurement. The utility was reviewing its procurement policy and retained PA to evaluate the relative benefits of contracting with local resources (to stimulate the local economy) versus selecting the lowest cost option (to minimize rates). Mason authored a white paper that evaluated the collective best interest of the utility's ratepayers, reviewed "buy local" provisions, considered the local economic development impacts associated with a range of investments (including thermal generation, wind, solar, and energy efficiency), provided an overview of common economic development multipliers, and reviewed Input-Output models such as JEDI and IMPLAN.

**Transmission Developer** – PA was engaged to evaluate the case for Wyoming wind generation in helping California more cost effectively and reliably meet its 50% renewable portfolio standard. Mason led an assessment of levelized costs, marginal curtailment rates, avoided overbuild costs, and installed transmission costs to facilitate a representative comparison of the true cost per unit of renewable energy required to meet California's RPS. The team evaluated the benefits provided by the transmission line, as measured by the renewable energy cost savings facilitated by the introduction of the superior Wyoming wind resource to the RPS compliance portfolio, against the cost of building and maintaining the line needed to access it.



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## Additional experience

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**Hawaiian Electric** - Mason has contributed to or led individual resource planning projects with Hawaiian Electric (HECO) and its subsidiaries Maui Electric (MECO) and Hawaiian Electric Light Company (HELCO) since 2009. In so doing, PA developed and tested multi-year resource plans which evaluated existing petroleum- and coal-fired thermal generation as well as a wide range of new generation options, including utility-scale renewables, battery storage, and a range of distributed energy resources (DERs). PA's analyses have leveraged hourly and sub-hourly production cost models to evaluate the technical and economic viability of existing and potential resources, project energy prices and environmental impacts under various scenarios, and determine the cost to the ratepayer.

**Energy Market Authority of Singapore** – In 2010 and 2014, PA was engaged by the EMA to identify the parameters used to set the Vesting Contract price for the Singapore power market. On both reviews, Mason led the effort to establish the financial parameters and determine the weighted average cost of capital (WACC) to be used in discounting projected cash flows for a hypothetical new generation development in Singapore.

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**SCOTT F. HESKETH, P.E.**  
**Manager of Transportation Engineering**  
**F.A. Hesketh & Associates, Inc.**

**Background**

Twenty six years of traffic, civil and transportation engineering experience including project management, preparation of traffic impact studies for industrial, commercial and residential developments, transportation planning, roadway improvement and traffic signal design and site design.

**Education**

University of Detroit  
Detroit, Michigan  
Bachelor of Civil Engineering, 1989

University of Minnesota  
Minneapolis, Minnesota  
Masters of Civil Engineering, 1992

Additional Studies at University of Hartford, 1984-86

**Professional Qualifications**

Licensed Engineer - Connecticut, 1997

**Professional Experience**

**1990 - Present - F.A. Hesketh & Associates, Inc., East Granby, Connecticut**

1990 – 2002, Project Engineer

2002 – present, Manager of Transportation Engineering

Manager of Transportation Engineering responsible for the management of projects, collection and analysis of data related to the impact of development projects on the surrounding highway network. Responsible for the preparation and presentation of traffic impact reports to local and state agencies. Emphasis in traffic projection, signal capacity and design, and the development of roadway plans and documents for these projects. Familiar with numerous capacity analysis and traffic modeling programs.

**GARY J. FUERSTENBERG, P.E.**

Senior Project Manager / Senior Geotechnical Engineer

**EDUCATION**

M.S., Civil and Environmental Engineering, University of Wisconsin-Madison, 1994

B.S., Civil Engineering, University of Wisconsin-Platteville, 1992

Continuing Education via professional organizations – seminars, workshops, etc.

**PROFESSIONAL REGISTRATION**

Professional Engineer:

2000/ CT (Reg. No. 21892)

2010/ DE (Reg. No. 17026)

2005/ ME (Reg. No. 9639)

2010/ MD (Reg. No. 38752)

2007/ MA (Reg. No. 46980)

2006/ NH (Reg. No. 12046)

2005/ NJ (Reg. No. 04596100)

2005/ NY (Reg. No. 083305-1)

2005/ PA (Reg. No. 72483)

2005/ RI (Reg. No. 8292)

1997/ WI (Reg. No. 332380)

NCEES Certification (Reg. No. 27038)

**SPECIALIZED TRAINING**

40-Hour OSHA Hazardous Waste Operations Training

8-Hour OSHA HAZWOPER Refresher Course

OSHA Lead Awareness

10-Hour OSHA Construction Safety

Nuclear Gauge Safety Training

Long Island Railroad safety

Metro North Railroad Safety

Amtrak Safety

**PROFESSIONAL SOCIETIES**

American Society of Civil Engineers

Connecticut Society of Civil Engineers –

Executive Board (2012 - present),

Geotechnical Committee Chair (2005 –

present)

**CERTIFICATIONS**

Envision Sustainable Professional

Mr. Fuerstenberg has 20 years of experience as a senior project manager, senior engineer, client manager, project engineer, and field engineer working on a broad range of civil, geotechnical, environmental, and water resource projects. His background includes experience in engineering consulting, construction engineering, teaching geotechnical engineering, and government (department of transportation – geotechnical section). Project types include:

- Utilities: electric transmission lines, pipelines (water, sewer, gas, fuel), substations, trenchless construction;
- Buildings: educational, medical and healthcare, commercial, office, retail, residential, industrial, government, research facilities, campus;
- Transportation Facilities: parking garages, pavements, local roads, highways, bridges, railroads;
- Water Resource: dams, levees, and storm barriers;
- Solid Waste Facilities: siting, permitting, liners, operations, covers, transfer stations, and subsurface sewage disposal;
- Environmental: Phase I ESA, Phase II, property transfers, UST removal, remediation of contaminated sites, soil management, long term monitoring; and
- Construction: excavation support, underpinning, special inspections, field testing, laboratory testing, instrumentation.

These geotechnical services are often integrated with environmental and civil/site engineering services.

Project skills include:

- Site characterization;
- Environmental remediation
- Foundations (shallow, deep, and ground improvement);

- Excavations in urban environments;
- Building underpinning;
- Earth retaining systems;
- Geotechnical instrumentation;
- Geotechnical documents (engineering report, data report, design report, and construction/record document report)
- Value engineering;
- Construction (plans, details, sections, profiles, specifications).

He has experience with a variety of geologic conditions including soft marine soil, peat, residual soil, varved clay, glacial clay, glacial outwash, glacial till, alluvial, weathered bedrock, bedrock, fill, and karst.

Mr. Fuerstenberg's experience spans the full project cycle, including planning, schematic/preliminary design, final design, construction, operation/commissioning, litigation/forensic.

## **RELEVANT PROJECT EXPERIENCE**

### **Energy/Utility – Capital (generation, linear)**

**NTE, Killingly Energy Center, Killingly, CT.** Geotechnical engineer for the site development of a 550-MW electric power plant. Improvements consisted of generator building, 1,000,000-gallon oil tank, 450,000-gallon water tank, 450,000-gallon fire water tank, electric switch yard, electric substation, 175 ft tall stack and ancillary buildings and equipment. Performed subsurface explorations and prepared Geotechnical Engineering Report. Subsurface conditions consisted of glacial till with bedrock outcrops.

**Eversource, Line 117 Improvements, Kingston-Duxbury, MA.** Geotechnical engineer for transmission line improvements. Improvements consisted of replacing existing timber structures at angle points with steel structures that are supported on caissons in a suburban corridor. Performed subsurface explorations, geotechnical laboratory testing and prepared Geotechnical Engineering Report. Subsurface conditions consisted of glaciofluvial deposits overlying bedrock.

**Eversource, Medway Substation Improvements, Medway MA.** Geotechnical engineer for hardened wall around substation. Wall consisted of precast concrete panels that are supported using steel trusses which are supported on caissons. Performed GPR scan to locate shallow rock and to locate underground utilities. Performed rock coring and unconfined compression testing on rock specimens for foundation design. Subsurface conditions consisted of glacial till with bedrock outcrops.

**United Illuminating, Pleasure Island Cable, Bridgeport, CT.** Geotechnical engineer for HDD design for 2,000-foot-long underground cable. Performed historical research – identified existing piles and marine structures. Coordinated detailed survey on land and water of site and overlaid historical information. Performed test borings on land and in water to verify subsurface conditions reported in existing boring logs (for other nearby projects). Prepared HDD design memorandum. Assisted with permitting and cost estimating. Performed value engineering to evaluate feasibility of other routes.

**United Illuminating (UI) LNG improvements, Milford, CT and Rocky Hill CT.** Geotechnical engineer for site improvements consisting of new vaporizer and heating building and associated piping for 1.2 billion gallon LNG tank site. Performed subsurface explorations and prepare Geotechnical Engineering Report. Subsurface conditions in Milford consisted of rock at a shallow depth. Subsurface conditions in Rocky Hill consisted of lacustrine soil to depths of 100 feet.

**Spectra Energy, Algonquin Gas Transmission, Burrillville RI, Chaplin CT, Cromwell CT, Southeast NY, Stony Point NY.** Geotechnical engineer gas compressor station improvements. Performed subsurface explorations, field permeability testing, and geotechnical laboratory testing. Prepared engineering memorandum for each site.

**Eversource, Haddam Substation Expansion, Haddam, CT.** Geotechnical engineer for global stability analysis and geotechnical engineering for electric substation expansion. Improvements consisted of 35-ft high retaining wall, electric transmission poles, dead end structures, substation equipment, and a sedimentation basin. Performed subsurface explorations, field permeability testing, seismic refraction survey, soil resistivity testing, geotechnical laboratory testing and prepared Geotechnical Engineering Report. Subsurface conditions consisted of glaciofluvial deposits.

**Eversource, Line 1810 Improvements, Southington, CT.** Geotechnical engineer for transmission line improvements. Improvements consisted of replacing existing poles with new poles that are supported on caissons or directly embedded into the ground in a suburban corridor. Performed clearing to access the exploration locations and load rated a private bridge to access one exploration. Performed subsurface explorations, geotechnical laboratory testing and prepared Geotechnical Engineering Report. Subsurface conditions consisted of glaciofluvial deposits.

**Eversource, Hopewell Substation Expansion, Glastonbury, CT.** Geotechnical engineer for electric substation expansion. Improvements consisted of dead end structures and substation equipment. Performed subsurface explorations, geotechnical laboratory testing and prepared Geotechnical Engineering Report. Subsurface conditions consisted of glaciofluvial deposits over bedrock.

**Rock-Tenn, Cogeneration Plant, Uncasville, CT.** Geotechnical engineer for new cogeneration plant (steam and electric). Improvements consisted of generator building with a stack and a utility bridge over the New England Central Railroad. Performed subsurface explorations (2 phases), prepared Geotechnical Engineering Report, and provided construction phase services. Subsurface conditions consisted of glacial till with bedrock outcrops.

**Northeast Utilities Glenbrook Cables Project- Fairfield County, CT.** Geotechnical engineer responsible for the oversight of fieldwork and report preparation for an underground 115kv electrical cable between the Glenbrook Substation and Norwalk Substation. The 9 mile route traversed 2-lane local roads in residential neighborhoods, a private road, Metro North Railroad property, the downtown Darien business district, and 6-lane US Route 1 in busy commercial areas. The project included trenchless crossing for the Norwalk River, Five Mile River, and Metro North Railroad. Performed about 60 test borings to depths of 10 to 50 feet and geothermal testing in 20 test borings, surveying, and about 475 laboratory tests on soil and rock specimens. Prepared recommendations for underground cable. Performed peer review for recommendations for trenchless construction methods for two river crossing and a 4 track railroad. Mr. Fuerstenberg also designed and installed a thermocouple system to measure the ambient soil temperature for rating the amount of current the electric cable can transmit. Two thermocouple trees were installed along the cable route in Darien, Connecticut. Thermocouples were located at depths of 5, 10, 15, and 30 feet. One thermocouple tree was located in an asphalt area to simulate paved conditions; one thermocouple tree was located in a grass area to simulate unpaved conditions. The thermocouples were connected to an 8 channel datalogger.

## **PUBLICATIONS AND PRESENTATIONS**

Fuerstenberg, G. "Great Wall of Haddam – Case Study". DFI Slopes, Slides and Stabilization, Presentation at Denver, CO, August 2-3, 2016.

Fuerstenberg, G., and O'Neill. "Money Not Spent on Explorations will be Spent on Litigation, Change Orders, and Contingencies – Do You Know Where Your Holder Is?" Poster Presentation at MGP 2012 - Fourth International Symposium on the Redevelopment of Manufactured Gas Plants, Chicago, IL, March 27 – 30, 2012.

Fuerstenberg, G. "Utility Protection in the Urban Environment." New England Real Estate Journal – Connecticut Fall Insert, September 2005.

Fuerstenberg, G. "Compare and contrast VE to TQM." Value World, October 1994.

## JAMES WALSH

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Profession	Mechanical Engineer
Specialization	Power projects
Position in Group	Project Manager and Supervising Engineer
Year of Joining Group	2007

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### KEY QUALIFICATIONS

Twenty five years of engineering experience involving multiple phases of plant design and development. Including the following activities: conceptual design, power cycle configuration, heat balances (GTPro and Gate Cycle), permitting, detailed design, and operations. Types of facilities including combined cycle, cogeneration and industrial projects both domestic and international. Extensively experienced in plant retrofit and performance improvements. Has been lead mechanical engineer and project manager on numerous major power projects.

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### EDUCATION AND PROFESSIONAL STATUS

Bachelor of Engineering (BE) Marine Engineering, with a concentration in nuclear power, State University of New York, Maritime College (Including United States Coast Guard Third Assistant Engineering License (lapsed))

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### EXPERIENCE RECORD

**2001 – Present**            **MOTT MACDONALD USA LLC**  
**(Member firm of Mott MacDonald Group incorporating**  
**Careba Power Engineers, LLC)**

**2001 – Present**            **Supervising Engineer/Project Manager**

**Project Manager & Lead Mechanical Engineer** – Responsible for engineering, development and permitting support for two domestic greenfield sites. Both sites are rated at 475 MW nominal and are based on combined cycle configuration in a one on one layout utilizing MHI technology, triple pressure heat recovery, reheat steam turbines and mechanical draft cooling towers.

**Lead Mechanical Engineer** – Responsible for detailed engineering and design of a 230 MW simple cycle, aero-derivative power plant in Massachusetts. The facility is primarily gas fired and includes a liquid fuel back up. The plant incorporates GE LMS100 (high temperature intercooler) technology and an air cooled heat sink. The facility includes trailer based water treatment, fuel gas compression and CTG emission control systems (SCR and CO catalyst).

**Lead Mechanical Engineer** – Responsible for detailed engineering and design of an 800MW simple cycle power plant in California. Plant consists of 8 GE LMS100 combustion turbines, SCR and CO catalysts, 6 gas compressors, zero liquid discharge wastewater system, and 8 cooling towers.

**Lead Mechanical Engineer** – Ongoing effort in support of permitting for 1250 MW combined cycle facility in South West US. Production of detailed heat balances, estimates for emissions, sizing and budgetary bids for select power island components. General arrangements and detailed site arrangements.

**Lead Mechanical Engineer** – Biodiesel production facility. Supervised mechanical engineering services for a 160 Million Gallon per year biodiesel facility located in the SW United States. Scope for this project included pre-treatment, distillation columns, high pressure steam distribution, cooling towers, centrifugal pumps (both seal less and standard ANSI type) heat exchangers and tanks.

**Senior Expert Specialist** – Litigation support for a claim regarding the installation of mechanical scope for a North East power generation facility. Claim aspects include lost productivity analysis, late engineering, faulty engineering, schedule review and analysis.

**Senior Mechanical Engineer** – 350 MW Desoto dual fuel, simple cycle peaking facility in Florida utilizing two GE 7FA combustion turbines.

**Senior Mechanical Engineer** – Responsible for the design and integration of a combustion turbine (2 x 12 MW dual fuel) island for cogeneration facility in Boston. Existing facility continued to operate on 24/7 basis throughout project. Balance of plant systems includes Urea to ammonia conversion, SCR and ammonia injection, light sulfur fuel oil, natural gas with compression, closed cycle cooling, open cycle cooling (w/existing cooling towers), etc.

**Senior Mechanical Engineer** – Design project to install a new dual boiler plant at an operating domestic chemical plant in the North-East US. Facility included two triple-fuel (fuel gas, fuel oil and hydrogen), saturated steam boilers, condensate return system, water softeners, etc. All components designed for optimum reliability and Code compliance. Systems included condensate return from both process and building heating, from 0% to 100%, make up water brine softeners, fuel oil delivery, fuel gas, hydrogen fuel, feedwater, etc.

**1998 – 2001**                    **STONE AND WEBSTER ENGINEERING, Boston MA**  
**Lead Mechanical Engineer**

**Lead Mechanical Engineer** – Mid-American Energy Cordova Station combined cycle facility. Responsible for overall conceptual design and pricing effort for nominal 500 MW combined cycle power facility utilizing multiple combustion turbine/waste heat boilers, STG, etc. Provided continued support to project execution team through construction.

**Lead Mechanical Engineer** – AES Londonderry combined cycle facility. Responsible for overall conceptual design and pricing effort for nominal 720 MW Siemens Westinghouse G Technology combined cycle power facility utilizing the latest technology combustion turbine generator, plume abated cooling tower, operating on both natural gas and distillate oil.

**Lead Mechanical Engineer** – Domestic mill upgrade. Responsible for overall conceptual design and pricing effort to convert operating paper mill to efficient merchant power (300 MW) and cogeneration facility using multiple combustion turbines, waste heat boilers, packaged boilers (7.5 k BHP), power boiler (20 k BHP), STG, condenser/cooling tower, etc.

**1993 – 1998**                    **PARSONS MAIN INC (CHARLES T MAIN INC), Boston MA**  
**Mechanical Engineer**

**Mechanical Engineer** – Conceptual engineering and development support for combined cycle power plant permitting. Duties and activities included detailed heat balance, cost benefit studies for numerous systems, Siting applications, National Pollution Discharge Elimination Study (NPDES) and Permit to Install (PTI).

Selected projects and assignments included:

- Midwestern Facility 1. Nominal 1,100 MW (4 x 107FA)
- Midwestern Facility 2. Nominal 1,100 MW (2 x 207FA)
- Midwestern Facility 3. Nominal 800 MW (3 x 107FA)

**Senior Mechanical Engineer** – Plant retrofit assignments. Multiple tasks associated to operating Northeast Power plants to evaluate operational problems, upgrade systems, and evaluate QF rating. Systems affected include: Distilled water, steam, feedwater, condensate, blowdown, site drainage, etc.

**1992 – 1993**            **PROTO POWER ENGINEERING**  
**(on contract to NORTHEAST UTILITIES MILLSTONE UNIT 2)**  
**Mechanical Engineer**

**Staff Engineer** – Site staff engineer on contract to Millstone Nuclear Power Station in Niantic Ct. Duties included preparing field work packages for testing, upgrade and services to reactor department systems – including fuel handling equipment, control room ventilation and Category 1 Safety related ventilation systems. Duties included preparing and presenting Safety Evaluations, Work Orders and dispositioning Plant Incident Reports.