

4.0 TECHNICAL ABILITY

4.1 Introduction

CMP has been a transmission and distribution utility in Maine for over 100 years and has significant experience developing, operating, and maintaining bulk transmission facilities within its service territory.

As one of the leading transmission utilities in New England, CMP has a deep understanding of New England's transmission system and additional transmission facilities needed to fulfill the energy policy goals of the region. CMP is committed to investing in New England's transmission grid to ensure that the energy needs of Maine and New England are satisfied reliably and in a cost-effective manner.

CMP is Maine's largest transmission and distribution utility. Founded in 1899, CMP currently serves over 615,000 customers in southern, western, and central Maine. CMP currently operates and maintains over 2,536 miles of transmission lines and 254 substations, 63 of which are administered by ISO-NE. Over the last 10 years, CMP has constructed approximately 500 miles of new transmission facilities in Maine, including most notably the very successful MPRP, CMP's \$1.4 billion investment to reinforce Maine's transmission grid for reliability purposes through upgrades to the existing system and the construction of new high voltage and extra-high voltage transmission lines and substations from Eliot to Orrington, Maine.

CMP initiated the MPRP in 2006 to study the strength of Maine's bulk power transmission system and to later implement the upgrades needed to improve the electric system's reliability and meet federal reliability standards. After nearly four years of intensive studies, planning, regulatory processes, and public outreach, in 2010 CMP obtained all necessary permits and approvals to construct the MPRP, and CMP and its contractors began construction of the Project in September 2010. Requiring the construction of 184 miles of new 345kV transmission lines and 256 miles of 115kV transmission lines, and the construction of six new substations and major expansions to six existing substations, the MPRP was the largest construction Project in Maine's history and required five years to complete.

Under the leadership of a strong management team, with careful and diligent attention to managing all facets of the Project, CMP completed the MPRP on time and under budget, delivering the reliability benefits promised by the Project to Maine and New England transmission customers in a timely and cost-effective manner. This same CMP management team will lead its implementation of the NECEC Project.

In addition to the MPRP, CMP has successfully completed several additional transmission development Projects since 2006. A summary of these Projects is provided in **Exhibit 3-3**.

In completing the MPRP and these other transmission Projects, CMP benefitted from the strong support of its ultimate parent, Iberdrola S., which provides transmission services in Spain, the United Kingdom and the United States, among other countries. Iberdrola S. has vast experience developing major transmission Projects around the world and a demonstrated commitment to investing in the energy infrastructure needed in Maine. Iberdrola S. fully supports CMP's participation in the NECEC and is prepared to provide the technical, Project management and financial support needed to ensure the successful completion of the Project.

4.2 Transmission Line Systems

4.2.1 HVDC Transmission Systems

Iberdrola S. has developed, managed, designed, and executed large HVDC Projects in the United Kingdom, Mexico, and the United States. Additionally, Iberdrola S. has participated in several HVDC research and development Projects.

4.2.2 345,000 Volt (345kV) Transmission System

CMP's highest voltage transmission system in Maine operates at 345,000 volts (345kV), linking CMP's system to the bulk power grids in New Brunswick, Canada and in southern New England. The 345kV lines provide an efficient, reliable way to move large amounts of energy, because higher voltages result in lower line losses (i.e., energy lost as current travels through a conductor). The 345kV systems include approximately 569 miles of transmission lines that feed the lower voltage transmission system through substations in Orrington, Windsor, Wiscasset, Lewiston, Pownal, Buxton, and Gorham, Maine.

4.2.3 115,000 Volt (115kV) Transmission System

CMP's 115kV transmission lines carry power from the 345kV substations and medium-sized generators to smaller substations throughout the CMP service territory. The 115kV transmission systems include 1,258 miles of transmission lines with connections to more than 60 substations. Five 115kV lines also connect CMP's system to neighboring utilities to the north (Emera Maine) and south (Public Service of New Hampshire). In addition, CMP supplies 115kV service directly to many large industrial customers.

4.3 Substations

CMP operates and maintains 254 substations of various voltages and sizes. Many of the substations are associated with lower voltage (34.5 kV) transmission lines and the electrical distribution line system.

4.4 Operation and Maintenance

CMP will be responsible for the operation and maintenance (“O&M”) of all transmission lines and other facilities associated with the NECEC Project. In the case of the less mature technologies proposed in this Project (HVDC transmission line, STATCOM and HVDC Converter) CMP will work with the equipment vendors and will follow the recommended maintenance practices for the equipment. CMP plans to use its own employees to perform most of the work on this equipment, initially under the direction of the vendor’s experts to obtain training, and eventually completely on its own. CMP will have ongoing contracts with the vendors to support emergent O&M requests. Planned maintenance of the NECEC transmission and substation facilities will be conducted and scheduled pursuant to the applicable ISO-NE requirements and best utility practices and generally will be performed without any planned long-term transmission/electrical outages.

4.5 Key Program Team Member Prior Experience

CMP has significant experience in the design, construction, and operation of electric infrastructure Projects, and will utilize staff capabilities for this effort. To support and supplement its staff on the Project, CMP has retained a team of highly qualified and experienced consultants and contractors. A brief qualifications summary is provided below for each of these companies.

Burns & McDonnell is providing support on environmental matters including federal and state permitting. Burns & McDonnell has over one hundred years of experience developing, managing, and constructing energy and infrastructure Projects in the U.S., and is currently serving as Program Manager for the Lewiston Loop Project in Maine. This Project includes a new substation on Middle Street in Lewiston, a 6-mile 115kV overhead transmission line between the Larrabee Road Substation and the new Middle Street site, a 1-mile underground 115kV line between Middle Street and the Lewiston Lower Substation, decommissioning of the Lewiston Steam Substation, and various other upgrades. Burns & McDonnell also served as the Program Manager for the MPRP which began in 2009 and concluded in 2015. For both the Lewiston Loop Project and the MPRP, Burns & McDonnell’s scope of work included providing permitting and regulatory compliance support. Burns & McDonnell has over 5,700 employee owners and offices throughout the U.S. including in Portland, Maine and Wallingford, Connecticut. Staff

from these and other Burns & McDonnell offices have been involved in supporting the NECEC, with additional assistance by professional staff from several other environmental and specialty firms including:

- a. Boyle Associates (wetlands, vernal pools, permitting assistance);
- b. T.J. DeWan and Associates (visual assessment, scenic character);
- c. Search, Inc. (historic archaeology and architecture);
- d. MCBER (economic consulting); and
- e. Daymark (economic consulting).

POWER Engineers is providing the transmission line and substation design as well as public involvement support. With over 40 years of consulting engineering experience in the power delivery market the POWER Engineers transmission and substation engineering design teams provide a deep pool of technically strong and knowledgeable engineers, designers, and drafters. Having a local presence in Maine has afforded the POWER Engineers design teams the opportunity to support the engineering and design needs of several of the largest power delivery programs in the Northeast (e.g., New England East West Solution - NEEWS and the Maine Power Reliability Program).

Dirigo Partners, Ltd. is a Maine based real estate services company that specializes in providing acquisition services to electric utilities. On the NECEC, Dirigo has sited and acquired over 50 miles of new transmission line corridor and all facility sites needed for the NECEC Project. Dirigo also sub-contracted to qualified environmental consulting firms for wetland and vernal pool delineations, and provided survey and mapping information in support of this work. Dirigo staff consists of licensed Maine real estate professional, foresters, and surveyors.

4.6 Key Personnel

Resumes for each are provided in **Exhibit 4-1** of this section.

Exhibit 4-1: Resumes

Ellen J. Miller

Work History *Avangrid Networks, Augusta, ME*

Executive Sponsor – Vice President Engineering Services

Ms. Miller is the Vice President of Avangrid Networks Engineering Services business area and is responsible for managing the engineering and construction project portfolio for four electric operating companies. She also served as the Director of Capital Delivery directly responsible for the execution of more \$600M investment from 2013-2016.

Ms. Miller has over 25 years in the utility industry and over 8 years in the area of program management. She has experience in the area of cost control and scheduling, permitting, contract development, project sequencing, and safety, quality and environmental management.

2016 - Present **Vice President Engineering Services**

- Management of Electric and Gas Capital project execution at Avangrid Networks (including the four operating companies: Rochester Gas and Electric, New York State Electric and Gas and Central Maine Power Company and United Illuminating).
- Responsible for execution and management of \$379M in external construction labor.
- Energized \$235M in reliability projects in 2016 - 2017.
- Project Sponsor for Western New York Public Policy Transmission Planning process.
- Management of the FERC Order 1000 transmission upgrade program for Maine and New York.
- Sponsorship of joint utility projects in New York; Auburn Transmission Project, Western New York Energy Link Solution.

2011 - 2016 **Director Electric Capital Delivery**

- Implementation and adoption of Quality Management System including ISO9001 certification.
- Sponsorship for stakeholder management: public outreach, public agencies, environmental, engineering, system planning.
- Obtained 2 Certificates to Build related to transmission line projects in the States of Maine and New York.
- Capital Investment exceed \$1,073M over five years.

2010 - 2011

Manager Electric Capital Delivery – Maine

Managed the delivery of \$100M in capital investment for the electric transmission system.

2008 - 2011

Project Manager – Maine Power Connection

Project Manager for proposed 200 mile \$625M transmission projects including:

- Development and coordination of regulatory filings, siting and environmental strategies, construction sequence, stakeholder forums with Maine Public Services.

Education

B.S., Business Administration, University of Maine, Orono, ME, 1984
Master Business Administration, 2015

Thorn C. Dickinson

Work History

Avangrid Networks, (f/k/a Iberdrola USA), Portland, ME

2011-present

Vice President – Business Development

- Responsible for creating and supporting business development and growth initiatives for Iberdrola USA. Growth initiatives include both green field development and mergers and acquisitions.
- M&A transactions included Connecticut Natural Gas, Southern Connecticut Gas, Berkshire Gas, Hartford Steam, NYSEG Solutions, Energetix and New Hampshire Gas.

2002-2011

Director Risk Management

- Assess and address the causes and effects of uncertainty and risk throughout the organization.
- Apply a variety of financial and statistical analysis and modeling approaches to accurately assess and make decisions about risk.
- Acquire adequate and cost effective risk financing for property, casualty, professional and environmental exposures for the company and its subsidiaries and oversee the claims management process.
- Identify the company's critical processes and ensure that there are tested contingency plans in place to restore those processes in case of a disaster.

1997-2002

Manager – Investor Relations

- Effectively communicate corporate strategy, financial results and expected performance to the investment community.
- Provide management information on financial markets, investor perspectives and peer performance.
- Develop, coordinate and present information to the investment community.

1997-2003

Manager of Rates and Revenue Requirements

- Responsible for state revenue requirement issues.
- Responsible for rate design development.

New York State Electric & Gas Corp., Binghamton, NY

1994-1997

Coordinator – Cost Support & Pricing

- Responsible for cost studies that support pricing strategies, profitability analysis, and regulatory compliance.
- Responsible for the testimony related to cost analysis in state and federal proceedings.
- Led a cross functional team charged with the development and application of models for the purposes of evaluating the risks and opportunities of a restructured competitive environment.

1991-1994

Staff Engineer – Planning & Procurement

- Performed financial analysis on supply and demand resources. One example of this analysis includes the analysis of how the corporation should comply with the Clean Air Act.
- Negotiated power purchase contracts with Non-Utility Generation. Kept these projects under control and moving forward from the initial contact with the developer through the contractual, engineering, construction, testing, commercial operation, and closeout phases of the project.

1988-1991

Field Engineer

- Managed a group responsible for the construction, operation, and maintenance of power delivery systems.
- Developed construction schedules, budgets, and determined manpower requirements for capital projects.
- Responded to customer concerns regarding voltage problems, system reliability, and equipment failure.
- Met with customers, other utilities, state, and county officials to coordinate work and to obtain permit approvals and easements.

Education

B.S. in Electrical Engineering

Union College, Schenectady, NY

Master in Business Administration

Syracuse University, Syracuse, NY

Bernardo Escudero

Work History

Avangrid Service Company, Portland, ME
Transmission Business Development

Jul/17-present

Director Business Development

- Project lead for the development of Transmission Projects developed by AVANGRID in response to the New England Clean Energy goals and other transmission growth initiatives within the US.

Central Maine Power Company (CMP), New Gloucester, ME
Engineering Services – Special Projects

2015-2017

Manager, Project Development

- Project management of the development of Transmission Projects, including the Maine Renewable Energy Interconnect (MREI), Maine Clean Power Connection (MCPC) and other transmission initiatives developed by AVANGRID in response to the New England Clean Energy goals.
- Support to AVANGRID Business Development in current and future initiatives under Iberdrola's Strategic Plan for growth in the USA.

Iberdrola Energy Projects, New Gloucester, ME
Networks Division

2011-2015

Project Controls Manager, MPRP

- Project lead and main point of contact for Central Maine Power (CMP) in the delivery of the Control and Compliance Services for the Maine Power Reliability Program (MPRP).
- Assessment of the MPRP Program Management Team, proposing areas for adjustment and reporting to CMP on their progress. Report periodically to Iberdrola USA Steering Committee and provide annual updates at the Maine Public Utilities Commission (MPUC). Management of the IEP Team assigned to this effort (group of 4+ employees including Project Control Specialists and Permitting Analysts)

Iberdrola Engineering and Construction, Glasgow (UK)
Networks Division

2009-2011

Key Account Manager for Scottish Power Energy Networks

- Key point of contact in IEC for SPEN. Management of contractual relationship. Coordination of IEC Networks Pipeline. IEC – Project Management and Engineering costs/income management. Schedule progress reporting. Team management (group of 10+ employees including Cost Controllers, Account Analysts and Program Controllers).

Implementation Manager of IEC UK Networks Division (through April 2010)

- Lead of the creation of the IEC UK Networks Division. Benchmarking of delivery model with Scottish Power Energy Networks. Establishment of new delivery processes, Department Structures and cost/schedule methodology. Development and implementation of the SPEN/IEC Framework Agreement for the Engineering and Project Management Services provided to Scottish Power Energy Networks.

Iberdrola Ingeniería Y Construcción, Madrid, Spain
Substations Department

2008-2009

Team Manager, Substations

- Manager of the team responsible for the engineering and project management of substation projects for Iberdrola Renovables in Spain. Technical lead and engineer of record.
- Team management (group of 15+ employees including Project Managers, Substation Engineers, Site Managers and Project Administrators). Engineering and construction management, project scheduling, project budgeting and contract management. Most notable projects commissioned within this period include: Sabina SS 132/20 kV, O Vieiro SS 132/20 kV, Medinaceli SS 400/132 kV, Páramo Vega SS 132/20 kV, Radona SS 132/20 kV, Aguaviva SS 132/30-20 kV.

Iberdrola Engineering And Construction, USA, Radnor, PA
Substations Department

2006-2008

Project Manager, Substations

- Support to Iberdrola Renewables in their implementation in the US, coordinating the Transmission & Distribution area of Iberdrola Engineering. Responsible for its internal budget and the management of the contractual relationship between the parties.
- Support to Iberdrola Renewables, USA: Technical Support and Owner Engineer for Locust Ridge SS 34,5/69 kV, Top of Iowa SS 34,5/115 kV, Jordanville SS 34,5/230 kV, Locust Ridge SS II 34,5/69 kV. Scheduling support, preliminary engineering development, technical assistance at meetings with electrical utilities, construction oversight. Development of substation detailed engineering and technical specifications for Providence Heights SS, including procurement management and technical support during construction. Development of work procedures, financial management, administrative management, adaptation of standard practices and procedures used in Iberdrola Ingeniería y Construcción to the US regulations.

Iberdrola Ingeniería Y Construcción, Madrid, Spain
Substations Department

2004-2006

Project Engineer. Substations

- Project management of substation projects for Iberdrola Renovables in various parts of Spain, including direct involvement in substation and control & protection engineering and site supervision.
- Project Management: Sil SS 220/20 kV extension, Chinchilla de Montearagón SS 66/20 kV, Larouco SS 132/20 kV extension.
- Development of new Projects in Poland: Kisielice SS 110/30 kV, Koniecwald SS 110/30 kV. Attendance to meetings with Utilities and technical support to Iberdrola Renovables.
- Civil and electrical engineering of the following substations: Maranchón I SS 132/20 kV, Maranchón IV SS 132/20 kV, Sierra de Dueñas SS 132/20 kV, Pedrosillo de los Aires SS 132 kV. C&P engineering of the following substation: Almansa SS 132/66 kV

Instalaciones Y Técnicas Solares, SI, Madrid, Spain
Solar Energy Department

Mar/03-Dec/03

Projects Engineer. Solar Projects

- Development, engineering and project/construction management of residential solar projects (PV and thermal).
- Solar hot water and solar pool heating system in a single family house through thermal solar energy; 5 kW Photovoltaic generation plants connected to grid; Power supply through PV systems in isolated environments.

Colegio de Ingenieros Del Icai (Engineering Association), Madrid, Spain
Engineering Department

2001-2002

Internship

QA/QC of high-speed railway projects (AVE Madrid-Valladolid). Preparation of ad-hoc reports and development of an internal engineering data base. Development of health and safety studies for various projects.

Education

Master's Degree in Industrial Engineering, ICAI (1996-2002)
Energy, Electrical Engineering
Comillas Pontifical University. Madrid (Spain)

Executive MBA in Global Energy Industry (2017-2019)
Strathclyde Business School, Glasgow (UK)
Comillas Pontifical University, Madrid (Spain)

Howard A. Coon

Work History

Avangrid Networks (f/k/a Iberdrola USA, Inc.) Augusta, ME

2014-present

Vice President & Treasurer

- Responsible for finance and treasury functions for Avangrid and its subsidiaries
 - Cash management, liquidity management, short-term funding, cash investment
 - Cash and treasury accounting
 - Long-term financing
 - Credit facilities
- Responsible for planning, forecasting and analysis of cash flow, capital structure and financial costs
- Responsible for managing banking, fixed income investor and rating agency relationships
- Responsible for regulatory matters related to financing – compliance with statute / regulation, support of rate filings
- Lead debt capital markets financings totaling in excess of \$6 billion and bank financings totaling in excess of \$3 billion

2003-2014

Assistant Treasurer

Marical, LLC

2000-2002

Chief Financial Officer

- Responsible for the finance and accounting function of this bio-science start-up
- Raised angel and venture stage equity capital

Unum Corp.

1996-2000

Vice President of Planning and Corporate Development

- Responsible for directing the corporate financial and strategic planning processes
- Responsible for identifying and executing on acquisitions and leading post-closing integration
- Primary lead on ~\$200 million of bolt-on acquisitions and junior executive lead on \$4 billion Unum-Provident merger

1986-1996

Various positions within Corporate Finance

Education

MBA, University of New Hampshire, Whittemore School of Business Economics, Durham, NH, 1991

AB, Economics, Bowdoin College, Brunswick, ME, 1984

William M. Sawyer P.E.

Work History

Central Maine Power Company (CMP)

2016-present

Principle Electrical Engineer - *System Protection Department*

- Protection Engineering
- Transmission Development

2010-2016

Manager- Electric System Engineering - *Maine Power Reliability Program*

- Manage the Maine Power Reliability Program

2002-2010

Manager- Electric System Engineering – *Capital Delivery Department*

- Managed the CMP departments responsible for Transmission Engineering, Substation Engineering, and Project Management
- Participated in the development of the Maine Power Reliability Program

2001-2002

Supervisor, Design Engineering – *Capital Delivery Department*

- Provided supervision to the Transmission Engineering and Substation Engineering Departments

1999-2001

Technical Coordinator – *System Protection Department*

- Oversaw the design of protection systems
- Responsible for start-up and commissioning of large scale transmission projects
- Participated in the development of transmission and substation projects

1987-1999

Electrical Engineer I, II, III, IV – *System Protection Department*

- Designed protective relay systems for transmission substations
- Performed start-up and commissioning activities for protection projects
- Managed protection and substation upgrade projects

1986-1987

Associate Engineer – *Engineering Department*

Various Electrical Engineering Assignments

Education

BS, Electrical Engineering Technology – University of Maine, Orono 1986

Justin Tribbet, P.E.

Work History

Avangrid Networks, Augusta, ME

2014-present

Manager of Substation Engineering

- Responsible for all substation engineering details for capital projects at Avangrid Networks (including the three operating companies: Rochester Gas and Electric, New York State Electric and Gas and Central Maine Power Company).
- Responsible for management of 6 direct reports and 20 total engineers spread across two states and three operating companies
- Key member of the capital budget team (estimating, grooming and prioritization of all capital project submittals)
- Member of ISO-NE System Design Task Force

Central Maine Power Company (CMP), Augusta, ME

2010-2014

Supervisor of Substation Engineering

- Responsible for all substation engineering details for capital projects at CMP (Central Maine Power)
- In addition to supervision duties acted as the substation engineering representative on several projects due to internal resource constraints
- Key member of the capital budget team (estimating, grooming and prioritization of all capital project submittals)
- Member of ISO-NE System Design Task Force

2008-2010

Associate Engineer (Projects)

- Worked as a project engineer, successfully completing several critical projects such as:
 - Kibby Wind Farm Interconnection- 132MW Wind Farm which required upgrades at 5 CMP Substations
 - Heywood Road Substation- Greenfield, four terminal, 115kV switchyard with capacitor bank
 - Circuit Switcher Upgrades at Winslow, Lakewood and Rice Rips- Completed all work internally such as design/drafting, relay settings, and commissioning.
- During project engineering work was responsible for all engineering areas including:
 - Estimating
 - Drafting

- Substation Design
- Concept review of civil design
- Protection and control design
- Integration design
- Relay settings and associated relay studies
- Commissioning

Portsmouth Naval Shipyard (US Navy nuclear submarine overhaul facility), Kittery, ME

2006-2008

Test Director/Work Control Representative

- Directed shipboard testing during three sea trials
- Lead integrated propulsion plant testing program that included electric plant turbine generator testing
- Worked with navy personnel to create and implement procedures and tag outs that set safe status for all non-nuclear work onboard the submarine
- Received several promotions and awards for timely completion of testing and dedication to project goals

2005-2006

Teacher's Assistant

- Selected to instruct the laboratory portion of the junior level electronics courses

05/2005-09/2005

Undergraduate Research

- Selected to participate in National Science Foundation Research Experience for Undergraduate Students that performed the preliminary investigation of the use of surface acoustic wave devices in biological applications
- Research directly resulted in a federal grant that provided a graduate research opportunity

Education

BS, Electrical Engineering Technology – University of Maine, Orono 2006
Graduated Summa Cum Laude with a GPA of 3.94 on a 4.0 scale

Paul A. Dumais, DSL

Work History

Avangrid Networks and Central Maine Power Company

2013-present

Director of Regulatory – *Avangrid Networks (f/k/a) Iberdrola USA Networks*

- Oversee CMP and MEPCO annual transmission formula rate administration
- Participate in FERC regulatory items pertaining to electric transmission matters
- Participate in New England regional energy matters, including the stakeholder process of ISO-NE
- Oversee transmission service and interconnection matters at CMP
- Assist with FERC related transmission regulatory matters in New York
- Team member of MREI and other transmission development projects

2010-2013

Director of Asset Management & Investment Planning – *Iberdrola USA*

- Enhance asset management capability by developing enduring asset management processes
- Integrate investment planning function, including determining allocation of capital investment and managing actual/plan variance through-out year
- Oversee mapping and asset record functions

2003-2010

Director of Regulatory Services - *Central Maine Power*

- Responsible for state ratemaking, budgeting and planning
- Represented CMP before Maine Public Utilities Commission on revenue requirements, rates and other issues
- Responsible for oversight of the development of annual budgets and managing variances throughout the year

1997-2003

Manager of Rates and Revenue Requirements – *Central Maine Power*

- Responsible for state revenue requirement issues
- Responsible for rate design development

1995-1997

Manager of Integrated Services – *Central Maine Power*

- Participated in and oversaw negotiation of special rate contracts with CMP's larger customers and oversaw people providing support to the sales and service teams

1980-1995

Various - *Central Maine Power*

- Various positions in accounting, finance and regulation

Education

BS, Business Administration – University of Maine, Augusta 1982

MBA – University of Southern, Maine 1986

Doctorate in Strategic Leadership – Regent University, Virginia Beach 2014

Gerry J. Mirabile

<u>Work History</u>	<i>Central Maine Power Company, Avangrid Networks, Augusta, ME</i>
2015-present	<u>Manager – Programs/Projects & Supervisor. Environmental Compliance Group</u>
2013-2015	<u>Manager – Programs/Projects. Environmental Compliance Group</u>
1989-2013	<u>Environmental & Licensing Coordinator, Environmental Specialist, Senior Environmental Specialist, Lead Analyst - Compliance</u>
1985-1989	<i>Maine Department of Environmental Protection, Augusta, ME</i> <u>Conservation Aid, Environmental Specialist II, Environmental Specialist III</u>

QUALIFICATIONS

- Thirty-two years' experience in environmental management, regulatory interpretation and administration, regulatory compliance, permitting, agency interaction, legislative work, and field studies.
- Four years at the Maine Department of Environmental Protection reviewing impacts of development proposals, conducting field studies, and educating the public.
- Twenty-eight years at Central Maine Power Company assuring compliance with laws, regulations and license conditions, working with environmental regulatory agencies, assessing and responding to legislative and regulatory proposals, supervising staff, managing programs, managing environmental contractors and obtaining Federal, state, regional and local licenses and permits, and conducting field studies.
- Experienced in a wide range of environmental issues from both the regulator and the regulated perspective.
- In-depth knowledge of Federal and state environmental laws, permitting thresholds, information requirements, approval criteria, and review processes.

PROFESSIONAL EXPERIENCE & ACCOMPLISHMENTS

Environmental

- Manage contractors responsible for preparation of Federal, state, regional, and local permit applications for capital projects (transmission/distribution lines, substations, generating facilities, service facilities, wastewater discharges, air emissions, navigational aids, submerged utilities, airport-vicinity aerial utilities). Review and edit all applications for accuracy, completeness, consistency with IUSA standards, and precedent prior to submission.

- Provide advice and recommendations to AVANGRID staff and contractors on siting and permitting issues for planned facilities.
- Present project proposals to Federal and state regulators, planning/zoning boards, city councils, and local citizens.
- Monitor, evaluate, and develop testimony and comments on proposed environmental, land use, permitting, vegetation management, chemical release, regulatory reporting, wildlife and fisheries, zoning, stormwater, underground tanks, erosion control, and waste management legislation and regulations, coordinating with AVANGRID and regulatory agency staff to assess operational and financial impacts on AVANGRID.
- Assist in obtaining CMP ISO 14001 facility certification, including developing aspects and impacts, objectives and targets for continuous improvement, standard operating procedures, work instructions, and compliance plans for environmental laws including utility location permitting, vegetation management, waste management, environmental due diligence, environmental system inspection and maintenance, revegetation, site cleanups, air emissions, PCB management, chemical release reporting, erosion minimization, cultural resource management, avian protection, third-party inspections, and stormwater/wastewater management.
- Manage CMP's Safe Drinking Water Act compliance program, conduct required sampling and arrange analyses, interpret analytical results, and develop remedial /mitigation measures as needed.
- Conduct or oversee transaction screens and Phase I Environmental Site Assessments on properties being purchased or sold by AVANGRID to evaluate baseline environmental conditions.
- Develop and implement oil and chemical release response, reporting, cleanup and documentation procedures, and train field personnel.
- Work closely with all levels of AVANGRID's environmental, engineering, technical, and facility staff to identify and resolve environmental and regulatory issues.
- Identify appropriate inspectors, oversee third-party inspector (3PI) contracts, and review and respond to all third-party inspection reports for large AVANGRID capital construction projects.
- Developed field study plans; conducted water quality, fishery and wildlife studies; drafted, edited, summarized, and presented study results to CMP management and regulators as part of FERC relicensing of hydropower projects. Recommended operational changes to mitigate environmental impacts.
- Recognized and rewarded for management of all Federal, state and local license and permit transfers as part of CMP generation asset sale to FPL Energy.
- Coordinate with USFWS and non-profits on New England Cottontail and American Kestrel survey and enhancement efforts on CMP transmission line rights of way.
- Manage licensing of CMP's commercial hazardous waste (PCB) storage facility (NASC), the first in Maine.
- Co-manage CMP's underground petroleum storage tank program, ensuring operational status and compliance with pertinent regulations.
- Conduct joint, multi-media environmental audits of AVANGRID facilities.

Communications & Regulatory

- Drafted and submitted to regulatory agencies, numerous summaries of environmental studies conducted in support of FERC and other Federal, state, regional and local permit applications.
- Represent CMP before Maine Legislature's Environment and Natural Resources Committee, develop and deliver expert testimony on permitting, wastewater licensing, toxic use reduction, oil spill reporting, PCB's, stormwater management, wetlands, and wetlands mitigation legislation.
- Represent CMP on Maine State Chamber of Commerce Environmental and Energy Policy Committee.
- Represented CMP on DEP's Long Creek Watershed Restoration Project.
- Represented CMP on recent task force to develop vegetation management BMPs for linear projects.
- At the Maine Department of Environmental Protection, communicated environmental and licensing requirements of various land and water use and development proposals to license applicants.
- Communicate often with Federal, state and local regulators, representing AVANGRID's interests, pursuing approvals, and clarifying compliance requirements.
- Drafted, reviewed and edited numerous articles published in CMP's weekly "Update" internal newsletter on a variety of environmental issues.
- Train AVANGRID project managers, engineers, field staff, and managers on greenhouse gases, licensing and permitting, erosion control, treated wood management, tanks management, SF6 gas management, ozone-depleting substances and greenhouse gases, EPCRA/SARA, facility decommissioning, and oil spill response, reporting and documentation.

Education

Husson University, Bangor, Maine
Master of Business Administration (MBA), 2013
Master of Science in Business (MSB), 2000

Johnson State College, Johnson, Vermont
Bachelor of Science in Ecology (BS), 1984
Recipient, 1984 Departmental Award for Excellence in Ecology

Rocio Cobo Chaparro

Work History

Avangrid Networks, Rochester, NY
Lead Engineer – Electric System Engineer

Feb 2017

Engineering & Delivery Special Projects

May 2016

E&D Electric Capital Delivery Rochester Gas & Electric Projects

Jan 15/May 16

Project Management Office Lead Rochester Gas & Electric Projects

Iberdrola Energy Projects, Rochester, NY

Feb 2014/Jan 2015

Responsible for the Project Control Team

Jan 2012/Feb 2014

Cost Analyst & Scheduler for New York State Electric & Gas Projects

Iberdrola Ingenieria Y Construcción, Madrid, Spain

Jun 2011/Jan 2012

Responsible for the Project Control team LEILAO (Brazil)

Mar 2011/Jun 2011

Project Control of the Combined Cycle Power Plant 1+1 based in Poland Offer

Jun 2006/Mar 2011

Responsible for the Project Control Team Iberdrola's Tower - Spain

Dec 2005/May 2006

Analyst on the Cost of Thermal Generation Project

Nov 2004/Dec 2005

Project Control of Wind Farms, Substations and Networks (Spain)

Education

PMP Exam Preparation Course (10/6/2016)

Alfonso X el Sabio University of Madrid, Bachelor of Civil Engineering

Technical University of Madrid, Bachelor of Technical Engineering In

Public Works, (Civil Construction)

Rita I. King

Work History ***AVANGRID Networks***

2016-present **Director, Business Development**

- Responsible for market intelligence and other aspects of development of transmission projects in response to New England Clean Energy goals and other business development initiatives in line with AVANGRID business growth plan.

UIL Holdings Corporation

2013-2016 **Senior Director, Business Services**

- Responsible for business service functions for the Customer & Business Services Division of UIL Holdings.
- Responsible for the Divisions strategic planning, metrics/key performance indicators, project & process management, business, financial, budgets, and customer service analytics.
- Responsible for benchmarking, process improvements and establishing, maintaining, and Exec level reporting of the Divisions dashboards, goals, key-performance indicators, including financial performance.
- Manage Business Services team of eleven (11) full time employees/positions.

The United Illuminating Company

2009-2013 **General Manager, GenConn Energy LLC**

- Responsible for managing joint venture partnership between United Illuminating and NRG Energy which was formed to develop, construct and operate 400MW of fast start peaking generation, with a total capital investment of approx. \$500MM thru a 30-year cost of service contract.
- Responsible to coordinate UI's duties under the administrative services agreement including treasury, accounting, financial records, auditing, income statements, budgeting, financial modeling, regulatory and accounts payable functions as required under all GenConn agreements.
- Responsible for managing, influencing and leveraging a positive relationship with partners to perform all activities required to fulfill all contractual, compliance and regulatory obligations.
- Responsible for ensuring that Devon and Middletown facilities achieved commercial operation as mandated under the PURA's contract for differences (CfD).
- Responsible for all construction and operational metrics reporting at UI level.
- Responsible for annual management and strategic planning of all regulatory rate proceedings, compliance filings, dockets, and other matters concerning the PURA, ISO and FERC starting with the 2009 rate case submittal.
- Represented GenConn in all matters involving government officials, state agencies, legislators, local municipal governments, industry groups and other stakeholders.

Regularly interfaced and presented to UI senior management and UI/UIIL Board of Directors.

2006-2009

Director, Strategic Account Services

- Director level responsibilities for a diverse team of ten (10) account managers in providing high quality customer service to 650 of UI's largest commercial, industrial and municipal customers.
- Implementation of robust, balanced account strategies; collaborative demand response, energy efficiency and construction project management. Spearhead efforts to resolve customer issues elevated by the account managers to the satisfaction of the client while maintaining UI revenue.
- Responsible to resolve customer issues stemming from regulatory and legislative arenas including net-metering, customer owned substations, energy improvement districts, EG/DG program requirements, alternate supplier complications, electric system process improvements, Data Center project sponsorship and municipal issues including collections efforts.
- Project Sponsor streetlight head replacements in 4 towns in 3 years resulting in the replacement of approximately 22,000 streetlight heads.

1988-2006

Various positions within The United Illuminating Company:

- Core Process Manager, Client Services (2004-2006)
- UI Economic Development Specialist (2001-2004)
- URI/UCI Business Analyst (1999-2001)
- Xcelecom Project Manager (1997-1999)
- DPUC Compliance Engineer & Transmission Planning Engineer (1988-1993)

Education

MS, Marketing, Rensselaer at Hartford, (formerly Hartford Graduate Center), Hartford, CT 1990

BS, Electrical Engineering, Worcester Polytechnic Institute, Worcester, MA 1988

Teresa M. Bradford

Work History **Avangrid Service Company**

2012-present **Director – Non-Utility Business**

- Responsible for Partnering with business area leader to direct and identify business development and growth opportunities.
- Responsible for evaluating potential business transactions by analyzing market position, historical and forward looking financials, risk factors and competitive environment.
- Responsible for development of models that can be used for project evaluation
- Responsible for analysis and evaluation of various financial aspects of opportunities with a focus on identifying areas which will make Avangrid more competitive
- Responsible for being the chief lead of all of Iberdrola USA's non-utility businesses including strategic planning, operations, contract management, developing financial and operational targets.

The Energy Network, Inc. (a subsidiary of Avangrid)

2005-2012 **Vice President & Controller**

- Responsible for oversight of all accounting functions for Non-Utility Companies
- Responsible for Sarbanes Oxley compliance

2004-2005 **Financial Reporting Manager**

- Responsible for preparation and review of monthly reporting packages including consolidations and fluctuation analysis

1998-2004 **Various Positions**

Education

BS, Accounting – Binghamton University, 1996

MARK A. GOODWIN, CPESC

Senior Environmental Scientist



Mr. Goodwin serves Burns & McDonnell as a senior environmental scientist. He has extensive experience in all phases of energy development projects, from environmental field surveys, environmental assessment, alternatives analysis, permitting, environmental training, and environmental compliance inspection, to post-construction monitoring and mitigation. As such, he possesses an extensive knowledge of the process of project planning, permitting and

construction, as well as a thorough understanding of the implications of regulatory requirements on construction activities.

A summary of his experience is provided below.

Section 388/3023 Replacement Project – Phase I | Maine Electric Power Company

ME | July 2016-Present | Program Management

Environmental Manager Mr. Goodwin coordinated a series of agency consultation meetings with the Maine Department of Environmental Protection to determine the applicability of the Site Location of Development Act Law for the reconstruction of 55-miles of 345kV transmission line. Additionally, Mr. Goodwin is responsible for managing the permitting effort and environmental field survey effort.

Darnestown Substation Project | Potomac Electric Power Company

MD | January 2016-Present | EPC

Environmental Project Manager Mr. Goodwin is responsible for coordinating with project management and engineering to identify the deliverables and information needed to prepare and submit applications to the Department of Permitting Services in Montgomery County, Maryland for the construction of an electric substation. Mr. Goodwin applied for and received building permits and ROW permits for the project.

Bangor Landing Coal Tar Capping Project | City of Bangor, Maine

ME | June 2016-Present | Environmental Services

Senior Environmental Scientist Mr. Goodwin performed a regulatory analysis to determine the permitting required to construct a non-aqueous phase liquid (NAPL) trapping cap over coal tar contaminated sediments in the Penobscot River associated with historic manufactured gas plant operation. Mr. Goodwin consulted with the National Marine Fisheries Service and the Army Corps of Engineers and researched and drafted a Not Likely to Adversely Affect (NLAA) letter in support of the project.

Jericho Rise Wind Farm Project | EDP Renewables, NA

NY | February 2016-Present | Construction Environmental Monitoring Services

Project Manager Mr. Goodwin's project management duties include the development of the construction environmental monitoring manual, compliance implementation training program, archeological awareness and unanticipated discovery plan,

EDUCATION

- ▶ B.S., Natural Resources

REGISTRATIONS

- ▶ Certified Professional Erosion & Sediment Control (CPESC)
- ▶ DEP Certification in Erosion & Sediment Control Practices (ME)
- ▶ OSHA 30-Hour Certification

7 YEARS WITH BURNS & MCDONNELL

18 YEARS OF EXPERIENCE



MARK A. GOODWIN, CPESC

(continued)

and compliance site assessments during the construction of this 37 turbine wind farm in upstate New York. Mr. Goodwin presented the initial environmental training program prior to the start of construction of this project.

Access Northeast Project | Spectra Energy| Algonquin Pipeline

NY, CT, MA | August 2015-Present | FERC Pre-Filing Services

Subject Matter Expert Mr. Goodwin assisted Spectra Energy during landowner informational meetings and the FERC open house meetings in support of the FERC pre-filing process for this pipeline and LNG storage infrastructure expansion project designed to support natural gas-fired electrical generation in New England. Mr. Goodwin provided project information to stakeholders from the public during these meetings including route identification and responded to questions specific to construction practices as a subject matter expert.

The Maine Power Reliability Program/T&D Project | Central Maine Power Company

Maine | October 2009-Present | Professional Services: 2009 | Construction: 2015

Environmental Project Manager Mr. Goodwin served as environmental project manager. His responsibilities included managing the local permitting effort for more than 70 municipalities as well as managing the construction phase regulatory compliance effort during construction of this electric reliability program consisting of over 350 miles of transmission line and multiple substation development sites. In this role, he participated in numerous public meetings and organized and coordinated multiple meetings with agency personnel. Mr. Goodwin coordinated with numerous outside consultants and managed the preparation and QA/QC of state and federal permit modification applications. He also managed the variance process for the approval of post-permit project design modifications. He was responsible for coordinating the compliance effort with the contractor's environmental representatives, the Maine Department of Environmental Protection (DEP) staff and inspection personnel, and local codes enforcement officers during construction. He also developed multiple interactive environmental training programs and trained over 5,000 workers on the Program.

CT Excelsior Wallingford Replacement Project | Tennessee Gas Pipeline Company/URS Corporation*

Wallingford, Connecticut | August 2009-October 2009

Subcontractor/Environmental Inspector Mr. Goodwin served as a subcontractor/environmental inspector on a small natural gas pipeline replacement project and valve and meter station upgrade in Wallingford, Connecticut. He coordinated the inspection activities and compliance with the conditions of approval with the local conservation commission inspector. He developed the environmental training program for the construction superintendents and labors and the environmental inspection reports issued to the project team.

Accomplishments: The project was completed with zero notices of violation.

Section 163 Rebuild | Central Maine Power Company/TRC Corporation*

April 2008-September 2008

Subcontractor/Environmental Inspector Mr. Goodwin served as a subcontractor/environmental inspector. While on Section 163 Rebuild Project, he acted as the liaison between CMP, the contractor, and the Maine DEP 3rd Party Inspector.

Accomplishments: The project was completed with zero notices of violation.



MARK A. GOODWIN, CPESC

(continued)

Southern York County System Reinforcement and Section 219/220 Rebuild Projects | Central Maine Power Company/Tetra Tech Inc. (formerly Northern Ecological Associates Inc.)*

Maine | September 1998-March 2008

Environmental Inspector Mr. Goodwin served as an environmental inspector. He provided third party environmental inspection for the Maine DEP on a 10-mile 115-kV electric transmission line project. He managed the Maine DEP third party inspection effort on two electric transmission rebuild projects.

Stony Brook Natural Gas Pipeline Project | Massachusetts Municipal Wholesale Electric Company*

Massachusetts

Environmental Inspector Mr. Goodwin served as an environmental inspector. He was a Massachusetts DEP third party environmental compliance monitor. He prepared an invasive species eradication and control program for the project. He prepared a planting plan as mitigation for unavoidable tree loss along the project corridor.

Northwest Everett Delta Pipeline Lateral | Williams Energy*

Washington

Environmental Inspector Mr. Goodwin served as an environmental inspector as a Federal Energy Regulatory Commission (FERC) third party environmental compliance monitor.

Annual Report Compliance Inspection Program | FERC*

Florida, Iowa, Minnesota, Mississippi, Nebraska, South Dakota, and Utah

Environmental Inspector Mr. Goodwin served as an environmental inspector and acted as a FERC third party environmental compliance monitor on multiple pipeline projects.

Jewel Ridge Pipeline Lateral Project | Duke Energy (Spectra)*

Virginia

Environmental Inspector Mr. Goodwin served as an environmental inspector. He acted as a FERC third party environmental compliance monitor. He assisted FERC and USFWS with developing innovative strategies for erosion and sediment control in mountainous terrain.

Third Party Technical Review of Notices of Intent Submitted by Weaver's Cove Energy, LLC, and Mill River Pipeline, LLC | Town of Somerset Conservation Commission*

Massachusetts

Third Party Technical Reviewer Mr. Goodwin served as a third party technical reviewer. He prepared a comprehensive regulatory review of Notices of Intent filed under the Massachusetts Wetlands Protection Act. The regulatory review assessed whether the applicant had met the performance standards required and included an assessment of impacts and proposed mitigation. He provided the results of the technical review at multiple public hearings with the conservation commission.



MARK A. GOODWIN, CPESC

(continued)

Various Integrity Management and Pipeline Relocation Projects | Granite State Gas Transmission*

Maine, New Hampshire, Massachusetts

Wetlands Delineation/Permitting Lead Mr. Goodwin performed environmental resource surveys and served as the state and federal permitting lead for various integrity management and pipeline rehabilitation projects along approximately 80-miles of Granite State Gas Transmission's existing natural gas pipeline in Massachusetts, New Hampshire, and Maine.

Lewiston Distribution Pipeline Project | Unitil (formerly owned by Northern Utilities)

Maine

Wetlands Delineation/Regulatory Assessment Mr. Goodwin performed environmental resource surveys, an alternatives analysis, and a regulatory assessment for local, state, and Federal permitting requirements along a proposed 2-mile pipeline corridor. He also assisted Northern Utilities in the selection of proper waterbody crossing methodologies to meet less stringent state permitting requirements.

Essex-Middlesex Pipeline Project | Tennessee Gas Pipeline Company

Massachusetts

Deputy Project Manager Mr. Goodwin served as deputy project manager and assisted with Massachusetts Wetlands Protection Act permitting (administered at the local level) in the towns of Wakefield, Lynnfield, and Saugus, Massachusetts. He attended and presented at public hearings, public meetings, and interagency meetings. Mr. Goodwin field coordinated the environmental field surveys conducted along the proposed 8-mile long natural gas pipeline and assisted with the preparation of Federal Energy Regulatory Commission environmental resource reports in support of NEPA permitting.

Londonderry 20-inch Replacement Project | Tennessee Gas Pipeline Company

New Hampshire and Massachusetts

Environmental Compliance Inspector/Field Coordinator/Report Manager Mr. Goodwin served as an environmental compliance inspector/field coordinator/report manager. He performed inspection, reports and field coordination for a comprehensive Turbidity Monitoring Program along a 19.3-mile pipeline replacement project. His responsibilities also included preparing and providing reports to the local conservation commissions, conducting rare plant species surveys, removal, and transportation following construction, and performing post-construction wetlands and waterbody restoration assessments.

Petal Gas Storage 100-Line and Cavern 3 and 8 Storage Field | El Paso Corporation*

Mississippi

Wetlands Delineation/Permitting Support Mr. Goodwin served performed wetland and waterbody surveys. He prepared the FERC wetland and wildlife resource reports, the biological assessment, and he performed the NPDES permitting for a natural gas storage cavern project.

Fairless Works Lateral Delivery System and Marketlink Pipeline Projects | Transcontinental Pipe Line Corporation*

Pennsylvania and New Jersey

Wetlands Delineation Mr. Goodwin performed the wetlands delineation and developed and performed a bog turtle habitat assessment for a small lateral pipeline project. He provided the client with post-permitting support following the issuance of the FERC certificate.



MARK A. GOODWIN, CPESC

(continued)

Northeast NY/NJ ConneXion Project | El Paso Corporation*

Pennsylvania and New Jersey

Wetlands Delineation Mr. Goodwin performed wetlands delineation and prepared the wetlands delineation report and the FERC water resources, vegetation, and wildlife resource reports in support of NEPA permitting for this natural gas infrastructure expansion project.

Patriot Pipeline Project | Duke Energy*

Virginia and Tennessee

Environmental Compliance Monitor/Reports Manager Mr. Goodwin served as an environmental compliance monitor and reports manager. He monitored compliance and prepared reports for NPDES discharge monitoring reports and FERC bi-weekly status reports.

Nationwide Wetlands Restoration Study/Evaluation of Pipeline Wetland/Waterbody Construction Procedures | FERC*

Iowa and Illinois

Field Team Leader Mr. Goodwin served as a field team leader. He led a team performing quantitative wetlands assessments in support of evaluation and revisions to the FERC Plan and Procedures.

Portland Natural Gas Transmission System (PNGTS) and PNGTS/Maritimes & Northeast Joint Facilities*

Maine, New Hampshire, and Massachusetts

Environmental Inspector Mr. Goodwin served as an environmental inspector. He conducted waterbody crossing inspections and turbidity monitoring during construction, post-construction wetland assessments, and he prepared the wetlands monitoring report submitted to state and federal agencies.

Northwinds Pipeline Project | National Fuel Gas*

Pennsylvania and New York

Wetlands Delineator Mr. Goodwin served as a field delineator and performed field verification and delineation of wetlands and waterbodies.

New York District Blanket Contract | U.S. Army Corps of Engineers*

New York

Field Team Leader Mr. Goodwin served as a field team leader. He led a team to perform environmental resource surveys on the south shore of Staten Island, New York, and he helped prepare the environmental impact statement for a flood storage project. He performed otter trawls, ponar dredges, and beach seines in support of multiple navigational channel dredging and beach replenishment projects.

**denotes experience prior to joining Burns & McDonnell*



LAUREN JOHNSTON, CPESC

Senior Environmental Scientist



Ms. Johnston serves Burns & McDonnell as a senior environmental scientist in the Environmental Studies and Permitting division. She has more than 10 years of experience specializing in regulatory reporting and permitting as well environmental compliance monitoring. Ms. Johnston has completed numerous regulatory site assessments for a wide variety of properties and client types. A summary of her experience is provided below.

Jericho Rise Wind Project | EDP Renewables NA

Franklin County, New York | February 2016

Consultant services- Ms. Johnston developed a construction environmental monitoring manual for the Jericho Rise Wind Project which included the development of 37 turbines, a new substation, electrical collection lines and associated infrastructure. After a comprehensive review of project documents, permits and plans, Ms. Johnston developed a compliance manual for use by the owner and developed pre-construction and construction compliance checklists. Ms. Johnston also assisted with the development of the environmental compliance training program that was presented to the project construction crew prior to the start of construction.

Lewiston Loop Project | Central Maine Power

New Gloucester, ME | 2015 to Present

Environmental compliance coordinator and inspector Ms. Johnston provides environmental coordination and inspection on this multi-component upgrade to the Lewiston/Auburn area electrical transmission system. The project includes the construction of a new substation, six miles of 115kV overhead transmission lines, one mile of underground 115kV through an urban area of Lewiston, decommissioning of an existing substation and various other upgrades to the supporting grid. Ms. Johnston interfaces between the owner, contractors and governmental agencies regarding permitting and environmental needs. Ms. Johnston additionally provides weekly environmental inspections during construction of the various project components. In this role, Ms. Johnston was also responsible for preparing the Construction General Permit Notice of Intent and an application for a minor revision to the Natural Resources Protection Act Permit for the project.

The Maine Power and Reliability Program | Central Maine Power

New Gloucester, ME | 2011 to 2015

Environmental compliance inspector Ms. Johnston served as an environmental compliance inspector on this \$1.4 billion dollar modernization of Maine's bulk power system. She coordinated preconstruction site walks and attends preconstruction meetings with Agency Staff, DEP Third Party inspectors and involved contractors. During the construction period, she identified problem areas and oversaw corrective action resolutions. The MPRP consisted of nearly 450 miles of linear transmission line construction which has provided her with a wealth of variable site conditions, knowledge of appropriate application of erosion and sediment controls and proper dewatering techniques. The MPRP included the construction of six new substations as well major upgrades to an additional six. She provided environmental inspection of the stormwater system

EDUCATION

- ▶ Natural Resource Management
University of Massachusetts-
Amherst, 2005

REGISTRATIONS/CERTIFICATIONS

- ▶ Certified Professional in Erosion and Sediment Control (CPESC)
- ▶ Certification in Erosion and Sedimentation Control Practices-
Maine DEP
- ▶ Adult CPR/AED
- ▶ Standard First Aid
- ▶ OSHA 30 hour CS&H

5 YEARS WITH BURNS & MCDONNELL

10 YEARS OF EXPERIENCE

LAUREN JOHNSTON, CPESC

(continued)

construction at many of these substation sites. She also reviewed restoration of the project sites for final stabilization and established re-vegetation. She has a clear understanding of local, State and Federal environmental requirements and permits. She worked closely with the client, contractors, and DEP third party inspectors to monitor project compliance.

EBI Consulting*

Burlington, MA | 2006-2011

Staff environmental scientist Ms. Johnston served as a staff environmental scientist, specializing in environmental investigations, site assessments, NEPA environmental reviews and SHPO evaluation and submittals for the telecommunications industry. She conducted numerous pre-acquisition assessments/due diligence assignments for a wide range of properties throughout the northeast. The assessments were performed to evaluate site conditions, potential off-site liabilities, historic site and vicinity use, and site remediation recommendations to prospective buyers, current owners and operators. She performed sampling of soils, lead paint and asbestos as part of her onsite field work.

**denotes experience prior to joining Burns & McDonnell*



RUSS CLAVETTE, PMP SENIOR PROJECT MANAGER

YEARS OF EXPERIENCE

23

EDUCATION

- M.A., Masters in Leadership Studies, University of Southern Maine (Exp.)
- B.A.Sc., Bachelor of Applied Science in Business Administration Management and Operations, University of Maine
- A.S., Associate of Applied Science in Applied Electronics Engineering, Kennebec Valley Technical College
- DIP., Electrical Lineworker Technology, Kennebec Valley Technical College

AREAS OF EXPERTISE

- Power Delivery EPC project management and execution
- Power Delivery system betterment program management and execution
- Power Delivery FERC 1000 project management and execution
- Earned Value Management
- Scope Management
- Time Management and Scheduling
- Cost Management
- Quality Management
- Resource Management
- Communications Management
- Risk Management
- Stakeholder Management
- Detailed electrical substation design and engineering from 4 kV to 345 kV
- Electrical substation engineering estimating
- Electrical substation equipment specification and procurement
- Electrical substation construction specification development
- Electrical substation construction
- Transmission and Distribution Line construction from 4 kV to 345 kV

(Continued Below)

EXPERIENCE SUMMARY

Mr. Clavette is a Senior Project Manager and certified Project Management Professional (PMP) with over 20 years of experience successfully planning, executing, monitoring and controlling power delivery based projects.

He exhibits strong project management and leadership skills which is solidified with a vast background in detailed substation engineering of transmission, distribution, high voltage, extra high voltage, air insulated, gas insulated, and HVDC electrical substations.

Mr. Clavette has successfully performed in the project technical lead role overseeing multi-disciplinary teams compiled of substation protection and control, physical, civil, structural, system studies, SCADA, communication, transmission line engineering, environmental, testing and commissioning.

He has managed major high profile substation and transmission line engineer-procure-construct (EPC), engineering-only, and FERC 1000 projects and well as system betterment programs for a gamut of electric utilities within the United States.

McPhee Electric, National Grid West Hampden 115/69/13.2 kV Substation, Massachusetts

Project Manager responsible for managing the complete substation engineering and equipment specification development for the West Hampden 115/69/13.2 kV air-insulated substation which was an NPCC Bulk Power System compliant, greenfield EPC project performed for National Grid New England. The project was undertaken to maintain system reliability, increase switching capabilities and provide local power redistribution in the Hampden County area of Massachusetts.

McPhee Electric, Eversource Energy Towantic 115 kV Switchyard Connecticut

Project Manager responsible for managing the complete substation engineering and equipment specification development for the Towantic 115 kV air-insulated switchyard which was a greenfield EPC project performed for Eversource Energy in Connecticut. The project was undertaken to tie in the state-of-the-art natural gas greenfield Towantic Energy Center to the Eversource Energy power grid.

Michels Power, National Grid Eastover Road 230/115 kV Station, New York

Project Manager responsible for managing the complete substation engineering, equipment specification development and commissioning for the Eastover Road 230/115 kV air-insulated substation, which was an NPCC Bulk Power System compliant greenfield EPC project performed for

SPECIAL TRAINING

Professional

- PM/PE Course Instructor, POWER Engineers, Inc.
- Risk Management, POWER Engineers, Inc.
- Substation Design, University of Wisconsin Milwaukee
- Substation Design Coursework, E/PRO Engineering, LLC
- Protection & Control Design Coursework, E/PRO Engineering, LLC
- Certified Thermographer, Level I and II, Infraspection Institute
- Cathodic Protection & AC Interference Mitigation, Henkels & McCoy
- GIS Technical Symposium, EUCI

Safety

- Adult CPR and First Aid, American Red Cross
- Certification of Contractors Responsibilities for Safety Compliance, Northeast Utilities
- Substation Safety Awareness, National Grid Service Company, USA
- OSHA10 Electrical Construction Training, Maine Safety Works

CERTIFICATION

- Certified Project Management Professional (PMP), #1605654

HARDWARE/SOFTWARE

- PTC MathCAD - Engineering
- WinIGS - Grounding Studies
- Lumen Micro – Lighting Calculations
- Excide - Battery Calculations
- MicroStation - Computer Aided Design
- AutoCAD – Computer Aided Drafting
- HighEst - Construction Estimating
- Microsoft Project - Scheduling
- Microsoft Excel - Spreadsheets
- Microsoft PowerPoint – Presentation
- Microsoft Visio - Dynamic Diagrams
- Microsoft Word - Administrative
- Oracle - Data Management
- Axiom EPM - Management
- Deltek - Enterprise Resource Planning

AFFILIATIONS

- Project Management Institute Member
- Project Management Institute, Maine Chapter, Member

National Grid New York.

The project was undertaken to maintain system reliability, provide transmission system protection, and provide switching capabilities for New York’s transmission power grid.

Eversource, Obsolete Equipment Program, Connecticut and Massachusetts

Program Manager responsible for managing several project teams for many substation betterment projects up to 345 kV. POWER was responsible for performing the substation scoping and engineering for several substation betterment projects from 34.5 kV to 345 kV. POWER provided the physical, civil, structural, and protection and control engineering required to remove and replace high voltage station post insulators, cap-and-pin insulators, rigid and flexible conductor, air break switches, carrier equipment, instrument transformers, station service equipment, structures and foundations for the system wide multi-year program within the utility system.

Eversource Energy, Relay Replacement Program, Connecticut

Program Manager responsible for managing several project teams for several substation relay replacement projects. POWER was responsible for performing the scoping and relay engineering for several substation relay replacement projects. POWER also provided the protection and control engineering and relay setting required to remove and replace relays, cabinets and panels for the system wide multi-year program within the utility system.

Eversource Energy, Oil Circuit Breaker Replacement Program, Connecticut and Massachusetts

Program Manager responsible for managing several project teams for many 115 kV OCB replacement projects. POWER was responsible for performing the scoping and substation engineering for several substation 115 kV breaker replacement projects. POWER also provided the physical, civil, structural, and protection and control engineering required to remove high voltage oil circuit breakers and replace them with SF6 breakers for the system wide multi-year program within the utility system.

Avangrid, Maine Renewable Energy Interconnect and Maine Clean Power Connection Programs, Maine

Project Manager responsible for leading a highly qualified and dedicated engineering focus team that worked closely with Avangrid to strategize an extensive FERC1000 effort to deliver clean energy transmission solutions throughout Maine. The objective included commitments from renewable energy generators to provide New England with clean energy alternatives.

POWER provided substation and transmission line engineering, design, estimating, environmental and wetland delineation services as well as general consultation for this important effort. The projects proposed several options including many miles of AC and DC high voltage transmission lines, several electrical substation betterment projects and greenfield substations throughout Maine.

KENNY VOLOCK, P.E.
CIVIL ENGINEER

YEARS OF EXPERIENCE

18

EDUCATION

- M.S., Civil Engineering, University of Maine, 1999
- B.S., Civil Engineering, Worcester Polytechnic Institute, 1996

AREAS OF EXPERTISE

- Design of Site and Foundations for Electrical Substations
- Public meeting presentations
- Design of Stormwater Management and Treatment Systems
- Design of roads, water, sewer, drainage and other civil engineering infrastructure
- Environmental permitting; local, state and federal
- Technical review for public agencies
- Resident engineering / construction inspection

LICENSING

- P.E., Civil: Virginia
- P.E., Civil: Maine
- P.E., Civil: West Virginia
- P.E., Civil: Kentucky
- P.E., Civil: Ohio

AFFILIATIONS

- American Society of Civil Engineers (ASCE)

EXPERIENCE SUMMARY

Mr. Volock is a Civil Engineer with experience in civil design for electrical substations, as well as various additional types of development. He is also experienced in environmental permitting for various types of projects. In his role as civil engineer, Mr. Volock has been responsible for site and stormwater management design, foundation design, contract documents, budgeting, scheduling, client relations and civil/structural technical review. Prior to entering the electrical utility industry, Mr. Volock was responsible for the design, permitting and technical and environmental review for a broad spectrum of land development projects including commercial site plans, residential subdivisions and roadway construction. He has significant experience with municipal infrastructure including sewer, water and stormwater system projects.

Central Maine Power Company, Saco Bay Reinforcement Project, Maine

Lead Civil Engineer for four substations constructed as part of a large, multi-faceted transmission upgrade. Performed site development and stormwater management design and developed erosion control measures to be used for project permitting and bidding. Developed a Request for Proposal to be used in contractor selection. Also provided design support and assistance during construction. The substations included 115/12 kV and 115/34.5 kV greenfield stations and 115/34.5/12 kV and 34.5/12 kV brownfield stations, delivered as an EPC project.

Central Maine Power Company, Athens 115/12kV Substation, Maine

Lead Civil Engineer responsible for site and stormwater management design, permitting services, foundation designs, and development of construction detail drawings and construction bid package. POWER provided complete detailed engineering and construction support for the substation.

Central Maine Power Company, South Gorham 115 kV Breaker Replacement, Maine

Civil Engineer responsible for designing foundations for 115 kV circuit breakers and for 115 kV independent pole operated circuit breakers. POWER is the prime EPC contractor for the addition and expansion of the South Gorham Substation. New equipment includes six 115 kV SF6 circuit breakers at the existing substation. POWER is providing overall engineering, procurement and testing and commissioning services.

Central Maine Power Company, South Gorham 345 kV Substation Expansion, Maine

Civil Engineer for the addition and expansion of a 345 kV yard to the South Gorham Substation, the critical substation for the upper Northeast Power corridor. Involved in civil engineering tasks. Checked the design of the masonry block control house walls and several equipment foundations. Drafted the Stormwater Management Operations & Maintenance Plan for the project site. POWER was the prime EPC contractor for this project. South Gorham is the gateway for 345 kV into the United States and serves the corridor from the Canadian border to Northern Massachusetts. POWER provided overall engineering, construction, procurement, testing and commissioning services. This project was finished ahead of schedule and accident free.

Central Maine Power Company, Maine Power Reliability Program, Maine

Civil Engineer responsible for site and erosion control design and development of construction detail drawings and construction bid package. The work was part of the Maine Power Reliability Program, an initiative to upgrade 400 miles of Central Maine Power's transmission lines, requiring site design for a number of new or expanded 345/115 kV substations.

Five Central Maine Water Utilities, Bangor Mutual Aid Study, Maine

Civil Engineer responsible for performing multiple Water Distribution System Aid Evaluations. Developed skeletonized water system model for five neighboring systems using WaterCAD software. Evaluated several scenarios where water may be transferred between systems in times of need. Evaluated proposed infrastructure improvements for their ability to augment mutual aid potential.

Private Developer, Office Building Expansion, Maine

Civil Engineer responsible for preparation of permitting and construction documents and application for the addition to commercial office building and associated site work. Duties included preparation of City Site Plan and MEDEP Minor Amendment to Site Location of Development applications, presentation to the city Planning Board for workshop and public hearing and utility and site design. Building expansion and site design received LEED Certification.

Maine Department of Transportation and City of Portland, Ocean Gateway, Maine

Civil Engineer for Pier 2 improvements including preparation of permitting documents and application for the expansion of marine transportation services on the City of Portland waterfront. Duties include preparation at MDEP Site Location of Development application, city major site plan review application, and assistance with the utility and site design.



JONATHAN BELL, P.E.
TRANSMISSION LINE ENGINEER

YEARS OF EXPERIENCE

6

EDUCATION

- M.S., Structural Engineering, University of Maine, 2011
- B.S., Civil and Environmental Engineering, University of Maine, 2009

AREAS OF EXPERTISE

- Transmission line engineering
- Structures and foundations
- Lattice tower upgrades and modifications
- Transmission construction means and methodology
- Civil and structural engineering
- NERC reliability assessment

LICENSING

- P.E., Civil: Maine

HARDWARE/SOFTWARE

- PLS-CADD
- PLS-Pole
- PLS-Tower
- L-Pile
- MFAD

AFFILIATIONS

- American Society of Civil Engineers (ASCE)

EXPERIENCE SUMMARY

Mr. Bell is a Civil/Structural Engineer who specializes in engineering design of HV and EHV transmission lines. He has experience in preliminary and detail design for new lines, line rebuilds and reconductoring projects for large utility companies. Detailed designs include 230 kV line reconductor projects, steel lattice structure analysis and reinforcement, installation of fiber optic shield wire systems, tubular steel pole structure design and analysis, foundation design, and development of detailed structure drawings and construction specifications and bid packages. He is also familiar with NERC reliability standards for transmission, and has been a key team member for large transmission facility assessment efforts.

Central Maine Power, 345 kV Rebuilds, Maine

Civil/Structural Engineer responsible for participating in structure and transmission design for the rebuild of two 345kV transmission lines. The project scope included structure replacements for approximately 54 miles of single circuit 345 kV transmission line on wood pole H-frame tangents and steel pole dead ends under energized conditions. POWER performed the preliminary and detailed engineering required to replace structures on the line while maintaining energized conditions for a majority of the construction duration and utilizing existing conductor and overhead shield wires.

Central Maine Power Company, Engineering Field Support, Maine Power Reliability Program, Maine

Engineer for a one-year field assignment to support the Maine Power Reliability Program, a multi-year program of upgrades and expansion to modernize CMP's 345 kV and 115 kV systems. Served as a resource for the project construction manager and inspectors for questions regarding specification requirements. Participated in site reviews and served as a resource for development of contractor execution plans. Provided quick and efficient interface between the field and POWER's in-office design staff, facilitating quick resolution to construction questions and issues. Observed construction and proactively communicated any engineering concerns to the construction manager and inspectors.

Ameren, Regulatory Compliance Analysis, Phases I, II, & III, Multiple States

Engineer responsible for PLS-CADD modeling. POWER is currently providing the ratings assessment for 7,600 circuit miles of transmission lines of Ameren's system to enable compliance with the NERC Recommendation to Industry for Facility Ratings Analysis. The scope of this project is to evaluate their ratings methodologies so that discrepancies between design ratings and as-built ratings can be identified. The existing clearances will be examined and compared to the standards set forth by both the National Electric Safety Code and Ameren. Remediation recommendations will be

made and designs created for correction. Construction support is also included.

Baltimore Gas & Electric, Northeastern Transmission System Improvement (NETSI) Projects, Maryland

Design Engineer for a series of new and upgraded 115 kV and 230 kV transmission lines. Responsibilities included designing the temporary interconnections required to build a new greenfield substation within the existing right of way, including relocation of several existing overhead 115 kV and 230 kV circuits, the modification of existing lattice towers, foundation design, installation of fiber optic ground wires and ADSS underbuild, coordination with BGE geotechnical consultant and surveyor, and production of drawings and construction documents. Scope of services also included the design of 22 miles of new double-circuit steel pole 230 kV transmission line from Graceton Substation to Raphael Road Substation with an interconnection into Bagley Substation. The design used temporary lattice tower alignment and steel structures to minimize outages and cost impacts. POWER provided preliminary and detailed engineering, structure analysis and design, foundation design, coordination with geotechnical consultants and surveyors and support for public outreach. POWER provided preliminary and detailed engineering, structure analysis and design, foundation design, coordination with geotechnical consultants and surveyors and support for public outreach.

Pepco Holdings, Underground and Overhead Transmission Standards Development, Multiple States

Engineer for a complete inventory and update of PHI's overhead transmission standards. Responsible for developing 138 kV and 230 kV structure framing and assembly drawings, and PLS-POLE library and structure models. Supported development of 69 kV structure framing and assembly drawings as well as development of design criteria and design standards. POWER helped PHI document existing business practices to determine what improvements could be made. The project resulted in design standard upgrades that will save PHI time, effort and resources.

Baltimore Gas and Electric, Hanover Pike 500 kV Substation, Maryland

Civil/Structural Engineer involved in structure and overhead transmission design for the interconnection of several 500 kV and 230 kV circuits into a greenfield 230kV/500kV substation. POWER performed the preliminary engineering required to file a Maryland CPCN. POWER is also performing detailed engineering including modification of existing lattice towers, design of new 500 kV and 230 kV steel structures, foundation design, engineering support for the development of an outage cutover sequencing plan, installation of fiber optical ground wires, coordination with BGE geotechnical consultant and surveyor, and production of drawings and construction documents.

JESSE SAWIN, EIT
SUBSTATION ELECTRICAL ENGINEER

YEARS OF EXPERIENCE

6

EDUCATION

- B.S., Electrical Engineering Technology, University of Maine, Orono, 2013

AREAS OF EXPERTISE

- Substation design
- Protection and control

LICENSING

- Engineer in Training: Maine

HARDWARE/SOFTWARE

- AutoCAD
- MicroStation

EXPERIENCE SUMMARY

Mr. Sawin is an Electrical Engineer in POWER's substation department. He has performed a variety of electrical and physical substation design activities including physical layouts, one line and three line diagrams, circuit breaker schemes, protective relaying schemes, wiring diagrams, panel layouts, and AC/DC station service calculations. Mr. Sawin has also been responsible for control house design, including cable tray and raceway design, and conduit and cable calculations.

Avangrid, Maine Renewable Energy Interconnect (MREI) & Maine Clean Power Connection (MCPC) Projects, Maine

Electrical Engineer responsible for performing Protection and Control engineering services for an extensive FERC1000 effort to deliver clean energy transmission solutions throughout Maine. The objective included commitments from renewable energy generators to provide New England with clean energy alternatives. POWER provided substation and transmission line engineering, design, estimating, environmental and wetland delineation services as well as general consultation for this important effort. The projects proposed several options including many miles of high voltage transmission lines, several electrical substation betterment projects and greenfield substations throughout Maine.

National Grid, Engineering Master Services Agreement, Multiple States

Protection and Control Engineer for substation design projects performed under a Master Services Agreement. Developed preliminary reports for multiple projects. Also supported the addition of a 23/13.8 kV modular bay. POWER provides detailed physical, electrical, and civil engineering and design services for new and upgraded substations from 4 kV to 345 kV. Services include preliminary and final design, field scoping, cost estimates, scheduling, system studies and evaluations, and construction support. Under the MSA POWER is helping National Grid resource fast-track projects, providing comprehensive engineering services and support as part of the utility's long-term reliability program. POWER's services include substation design, overhead transmission line design, underground transmission line design, protection and control design and implementation, distribution design, system studies, SCADA design, project management, and construction management and inspection.

National Grid, Riverside Substation Upgrades Project, Rhode Island

Protection and Controls Engineer responsible for the engineering and design for the following:

- 115 kV Primary and Secondary R9 and J16 Line Relaying Upgrades

- 115 kV Breaker Failure Relaying Addition
- RTU Replacement, Annunciator Addition
- 115 kV Circuit Breakers, Disconnects Switches, and CCVT Replacements (All)
- 115 kV J16 Bus Replacement, LTU and Line Trap Addition
- Yard Cable Trench and Conduit Raceway System

Eversource, Devon 7R Substation Control House Modification Project, Connecticut

Protection and Controls Engineer responsible for the engineering and design of a substation controls upgrade and plant separation at the Devon 7R substation. Prepared one lines, three lines, schematics, wiring diagrams, interconnects, SCADA points lists and performed AC/DC station service calculations. Worked closely with design team to prepare packages in accordance with client standards.

Eversource, Obsolete Component Replacement Program, Multiple States

Protection and Controls Engineer responsible for the engineering and design of obsolete component replacements. Prepared one lines, three lines, schematics, and interconnects for miscellaneous hollow-core insulator equipment replacement. Equipment included motor operated disconnect switches, manual disconnect switches, potential transformers, current transformers, lightning arresters and metering.

Progress Energy Florida, Substation Readiness DSCADA Project, Florida

Design Engineer responsible for the design of communication and telecom system upgrades. Prepared wiring diagrams, schematics, and interconnects for network communications. Used client standards to maintain consistency for utility wide upgrades and comply with unique site requirements. Processed as-built field prints and prepared record drawings. POWER provided EPC services for installation of gateways/RTUs and telecommunication equipment at approximately 199 substations to the point of interconnections with the local telecommunication provider. The project implemented changes within PEF's substations to enable SCADA/Smart Grid control and monitoring for distribution assets separate from existing transmission SCADA systems. The project had over 70 engineers designing in six separate states, along with another 50 personnel implementing and supporting the construction and back office functions. Finished ahead of schedule, under budget and accident free.



Ken Freye

Manager, Capital Projects, Partner

Expertise

- Project Management
- Resources & Real Estate Management
- Land Acquisition
- Negotiations
- Contracts

Education

- M.S. Forest Management & Economics, Michigan State University

Registration

- Licensed Real Estate Broker, State of Maine
- Licensed Forester, State of Maine

Professional Experience

Dirigo Partners Ltd.
2013 – current

Burns & McDonnell
2010 – 2013

Central Maine Power Company
1988 – 2010

International Paper Company
1976 - 1988

Dirigo Partners, Ltd.

Ken manages the capital projects for Dirigo Partners and is a partner in the firm. His experience as a corporate real estate manager gives him true insight into our clients' needs. He has demonstrated proficiency in financial and economic analysis, project development and management, real estate and land law. Ken has extensive knowledge of utility real estate ownership and needs, and has a solid working knowledge of electrical transmission and substation design and corresponding real estate needs in addition to a sound knowledge of contract and real estate law. He is a Licensed Real Estate Broker and Forester in the State of Maine.

Select Projects and Experience

Greenfield Corridor, 345 kV/ HVDC, Central Maine Power Company Maine, 2014 - current

Ken managed the siting, acquisition, survey and wetlands mapping for a greenfield 300-foot wide, 50+ mile corridor and associated substation sites connecting existing Central Maine Power Company (CMP) transmission lines with the Province of Quebec, Canada. The project involved complex negotiations with public agencies, private and industrial forest landowners and managing subcontractors for aerial imagery, survey and environmental work. The acquisition phase of this project is substantially complete and has entered engineering design and permitting where Ken and Dirigo Partners continue to be significant contributors.

Pittsfield to Keene Road, 345kV, Maine Electric Power Company, Inc. Maine, 2015 - current

Ken managed the siting and acquisition of a new 345 kV corridor approximately 70 miles long involving greenfield and co-location with over 170 acquisition parcels. Developed acquisition protocols, documents, pricing matrix and metrics, and manages the ongoing efforts of ten acquisition agents. Currently 67% of parcels are secured. This project is a collaborative effort of Central Maine Power Company and Emera Maine through their wholly owned subsidiary, Maine Electric Power Company, Inc.

Susquehanna to Roseland Project, PPL Electric Utilities Pennsylvania, 2012 - 2013

While with Burns & McDonnell (BMcD), Ken joined the construction management team on a 100 mile 500 kV transmission line link between Pennsylvania and New Jersey, focusing on obtaining Highway Occupancy Permits from PennDOT, QA/QC of all land rights, licenses and access rights obtained by PPL and evaluation of existing rights for fiber optic communications. BMcD was able to update and create real estate layers in its GIS system as a result of the QA/QC process. Ken also assisted in resolving encroachments, landowner access issues, and improving stakeholder relations.

Maine Power Reliability Project, Central Maine Power Maine, 2007 - 2014

Ken first managed this program as the manager of CMP's real estate department and then as a project manager working for BMcD. The 450-mile, 4000+ parcel Maine Power Reliability Project consisted of both corridor expansion, greenfield corridor and construction/reconstruction within existing corridors. As the CMP real estate manager, Ken was responsible for overseeing all real estate related activities rights and restrictions investigation, options, acquisitions, encroachments, licensing, valuation, property inspection, relocation and property management, including sole

Ken Freye (continued)



approval of most real estate transactions. As project manager for BMcD, Ken focused on acquisition strategy, quality assurance, condemnation strategy and execution, affiliate transactions, and the transfer of mitigation parcels. Ken also was a member of the team that resolved A/C voltage and current issues related to parallel occupancy and crossings of pipelines, communication cables and railroads within the EHV transmission line corridor.

Oklahoma 345 kV Projects, Oklahoma Gas & Electric, Oklahoma, 2011 - 2012

Ken was Program Coordinator for BMcD on real estate issues on the three OG+E 345 kV projects, providing insight and solutions with a focus on reducing condemnations and improving stakeholder relations. Beginning in January 2011, Ken routinely traveled to Oklahoma to coordinate the BMcD acquisition efforts and the expectations of the client. The condemnation rate on each successive project dropped significantly, substantially reducing the client's legal costs and improving stakeholder relations.

Manager, Real Estate Services, Central Maine Power Maine, 1988 - 2010

Property Acquisition - Completed all transmission, substation, service facility and communication site acquisition projects on time and within budget. Directed all phases of the acquisitions including budgeting, valuation, due diligence, negotiations, survey, preparation of legal documents, and interdisciplinary coordination. Developed innovative solutions to numerous acquisition problems.

Property Sales and Disposition - Leader of the Land Team for an \$847 million sale of electrical generation assets. Responsible for team charged with all real estate due diligence, translation of electrical diagrams into real estate documents; negotiated interpretations of contract terms; responsible for the preparation of all real estate documents. Successfully closed transaction on time despite delays by buyer. Negotiated co-location of 175 +/- miles of interstate natural gas transmission lines within electrical transmission line corridor, including the development of separation documents and forward looking operation documents, resulting in settlements for employer far in excess of initial condemnation values. Sold surplus facilities and real estate for the public utility. Experienced with the clean up and/or disposition of brownfield sites.

Real Estate Management - Managed portfolios of timberland, recreation properties, residential and commercial properties, utility facilities, and rights-of-way for public utility for over twenty years. Annual lease, timber and gravel sale revenues in excess of \$1 million. Developed land records data base of over 20,000 electronic images to facilitate securing \$150 million mortgage indenture. Developed, analyzed, and managed budgets ranging in size from \$500,000 to \$10 million. Corporate authority for real estate transactions up to \$50,000. Managed staff of real estate professionals.

International Paper Company, Alabama, Vermont, Maine, 1976 - 1988

Progressed from Forester to Manager, Economics and Real Estate. Evaluated large tracts of commercial timberlands for potential sale including the gathering of timber growth and inventory information for wood products marketing projections; experienced in statistical sampling techniques. Negotiated the purchase or exchange of commercial timberlands with the largest tracts exceeding 50,000 acres. Developed economic analysis models for evaluating timberland transactions and land exchanges. Responsible for the sale of surplus lands and facilities.

Realty-Specific Seminars

"2 Day Appraisal Curriculum Overview", sponsored by the Appraisal Institute (02/2010)
MEREDA Annual Forecast Conference, Maine Real Estate Development Association (2003-2011)
Business Practices & Ethics, sponsored by the Appraisal Institute (2004,2006,2008,2010)
"USPAP Update Course", by the Maine Chapter of the Appraisal Institute (2002, 2004, 2006, 2008)
"Evaluating Commercial Construction (2 days)", sponsored by the Appraisal Institute (01/2007)
2007 National USPAP Course, Van Education, (10/2006)
Principles & Procedures for the Location of Boundaries in Maine, Maine State Bar Assn. (08/2006)
2005 Real Estate Institute, sponsored by the Maine State Bar Association (03/2005)
"Fair Housing & Diversity Core Course", required by Maine Real Estate Commission (4/02)
"The Impact of Mold on Real Estate" sponsored by the Maine Indoor Air Quality Council (3/02)
"Commercial Real Estate Contracts in Maine, Maine Commercial Association of Realtors (1/02)
"Real Estate Research – Using the Internet, Maine Chapter of the Appraisal Institute (11/01)
"Attacking & Defending Appraisals in Litigation", Appraisal Institute, Chicago, IL (06/01)
"The State of the Maine Economy", Maine Chapter of the Appraisal Institute (06/01)
"Business Valuation for Real Estate Professionals", sponsored by the Center for Real Estate Education, University of Southern Maine, Portland, ME (06/97)
"Small Hotel/Motel Valuation", sponsored by the Appraisal Institute, Chicago, IL (05/97)
"The Internet & Appraising", sponsored by Maine Chapter of Appraisal Institute, Bath, ME (4/97)
"Environmental Awareness", Allstate Home Inspections, Inc., Randolph Center, Vermont (3/97)
"Into the Public Markets: Real Estate in the New Financial Area", sponsored by the Massachusetts Institute of Technology Center for Real Estate, Boston, MA (10/94)
"Government Regs - Hazardous Waste, ADA, & Wetlands", ME Chapter - Appraisal Institute (11/92)
"Boundary Law in Maine", sponsored by the National Business Institute, Inc., Eau Claire, WI (10/92)
"Appraising Troubled Properties", sponsored by the Appraisal Institute, Chicago, Illinois. (5/92)

Professional Experience

May 2003 to present	President & Business Manager Dirigo Partners, Ltd., Augusta, Maine
November 1997 to May 2003	Managing Director & Senior Analyst/Appraiser Dirigo Partners, Ltd., Augusta, Maine
April 1990 to November 1997	Director & Senior Analyst/Appraiser Dirigo Partners, Ltd., Portland & Augusta, Maine
April 1990 to 2009	Investment Realty Analyst/Broker Venture Ltd. Real Estate, Augusta, Maine
March 1987 to April 1990	Commercial Realty Appraiser Northern Appraisal Associates, Manchester, NH
September 1986 to March 1987	Vice President and Realty Appraiser Singleton Appraisal Company, Bangor, Maine
July 1985 to September 1986	Realty Appraiser J.F. Singleton Company, Bangor, Maine
July 1984 to July 1985	Realty Broker J.F. Singleton Company, Bangor, Maine

References available upon request

HEATHER STORLAZZI WARD (NHCWS, CPESC)

Boyle Associates – Senior Wetland Scientist/Inspector

Email: heather@boyleassociates.net

Mobile Phone: (207) 317 - 6630

EXPERIENCE:

Boyle Associates, Kennebunk, Maine November, 2006 – Present
Senior Wetland Scientist/Inspector

- Provide clients with full environmental assessment services, including: wetland delineation, vernal pool surveys, wetland functional assessment analyses, and mitigation sequencing.
- Negotiate, complete and acquire local, state and federal environmental permits.
- Conduct on-site environmental training and inspection services for construction projects including MDEP Third-Party (3PI) for construction projects.
- Provide clients with post-construction environmental assessment and monitoring of wetlands and other sensitive areas per project requirements.
- Remote sensing for wetland identification and classification and site selection/alternatives analysis.

Gove Environmental Services, Inc., Exeter, New Hampshire 1998 – November 2006
Wetland Scientist/Project Manager

- Provide clients with full wetland services, including wetland delineation, boundary mapping using GPS and GIS, functional assessment analyses, permit preparation and acquisition, and mitigation design and monitoring.
- Conduct on-site environmental inspection services at various general development construction projects.
- Permitting and regulatory advising; Preparation of federal and state permit applications; Clean Water Act Secs. 401/404 and 404(b)(1) Analyses.
- Remote sensing for wetland identification and classification and site selection/alternatives analysis process.
- Wetland delineations, functional analysis, impact assessments, and resource protection.
- Wetland mitigation location search, mitigation design and monitoring.
- Vernal pool documentation, wildlife habitat evaluations and conservation easement documentation.
- Documentation for avoidance and minimization in project design and assists in the preparation of both on site and off site alternatives analysis.

Northern Ecological Associates, Portland, Maine 1997 – 1998
Wetland Scientist

- Provide clients with full wetland services, including wetland delineation, boundary mapping using GPS and GIS, functional assessment analyses, permit preparation and acquisition, and mitigation design and monitoring.

EDUCATION:

- University of Maine, Orono, Maine
B.S. Degree: Natural Resources: Natural History and Ecology May, 1994

CERTIFICATIONS:

- New Hampshire Certified Wetland Scientist (#206), New Hampshire Joint Board of Licensure
- Certified Professional in Erosion and Sedimentation Control (#3220), IECA and the Soil and Water Conservation Society

MEMBERSHIPS:

- Maine Association of Wetland Scientists
- New Hampshire Association of Natural Resource Scientists

FORMAL AND PROFESSIONAL TRAINING:

Assessments of Diverse Habitats

Wetland and Stream Restoration and Construction

Natural History of Maine

Entomology

Conservation Biology

Ecology

Wetland and Vernal Pool Identification and Delineation

Soil Taxonomy and Soil Science

Erosion & Sedimentation Control

Plant Identification and Taxonomy

Global Positioning Systems (GPS)

Geographic Information Systems (GIS)

JARED BOYLE

Boyle Associates – Wetland Scientist/Environmental Inspector

Email: jared@boyleassociates.net

Mobile Phone: (207) 274 - 4222

EXPERIENCE:

Boyle Associates, Gorham, Maine

Environmental Scientist/Inspector

May, 2013 - Present

- Conduct on-site environmental training and inspection services for construction projects.
- Delineate wetland resources in accordance with current natural resource regulations and methodologies.
- Water management and preservation projects.
- Identify and control invasive plants for wetland creation permit compliance and habitat restoration projects.
- Map and assess vernal pool habitat including pool origin, biological abundance, and jurisdiction.
- Conduct resource boundary mapping using Trimble GPS hardware and software.
- Assist in natural resource data collection, analysis and reporting.

Environmental Scientist Intern

Spring/Summer 2008-2010, 2012

- Identify jurisdictional wetland resources for the presence of hydrophytic vegetation, hydric soils, and indicators of wetland hydrology.
- Identify vernal pool habitat.
- Assist in natural resource data collection, analysis and reporting.

Santa Barbara Zoo, Santa Barbara, California

Education Counselor

2012

- Educate zoo visitors about animals and their habitat.
- Raise public awareness of society's effects on the environment and efforts people can make to lessen their impact.

EDUCATION:

• University of Maine, Orono, Maine

May 2010

B.S. Degree: Ecology and Environmental Science



AMY BELL SEGAL RLA, ASLA

SENIOR ASSOCIATE | LANDSCAPE ARCHITECT

Amy's twenty five years of experience includes scenic resources and visual resource assessments, downtown master planning, urban design, recreation and trail planning, playspace design, urban agriculture, site planning for residential, commercial, and industrial properties, shoreland zoning permitting and construction management.

SELECTED PROJECT EXPERIENCE

NEW ENGLAND CLEAN ENERGY CONNECT Visual Impact Assessment of 145 miles of new HVDC Transmission line and associated upgrades, 16 miles of Rebuilt 115 kV transmission line, and 26 miles of co-located 345 kV transmission line proposed to deliver electric generation from the Canadian Border through Maine to the New England Control Area for Central Maine Power, Sub-consultant to Burns & McDonnell.

NUMBER NINE WIND FARM, EDP RENEWABLES, Aroostook County, ME. Visual Impact Assessment for 129 turbine wind farm and 50 mile generator lead line.

BULL HILL AND HANCOCK WIND PROJECTS, Blue Sky East LLC, Hancock County, ME. Visual Impact Assessment for adjacent wind projects with total of 37 turbines.

SPRUCE MOUNTAIN WIND PROJECT, PATRIOT RENEWABLES, Woodstock, ME. Prepared Visual Impact Assessment for proposed 11 turbine wind project.

SADDLEBACK MOUNTAIN WIND PROJECT, PATRIOT RENEWABLES, Carthage, ME. Visual Impact Assessment for 12 turbine wind project.

MAINE POWER RELIABILITY PROGRAM. Visual Impact Assessment for 352 miles of new 115 kV and 345 kV transmission line corridor system upgrades in 82 Maine towns, for Central Maine Power.

LEMPSTER MOUNTAIN WIND POWER PROJECT, COMMUNITY ENERGY, Lempster, NH. Photosimulations for a 12 turbine wind project.

STETSON I & II WIND PROJECT, EVERGREEN WIND V, LLC, Washington County, ME. Visual Impact Assessment including 3D Modeling and photosimulations for a 38 turbine wind project.

JAMER MATERIALS, LTD. BAYSIDE, New Brunswick, Canada. Visual Assessment for proposed quarry expansion and conceptual design of Eco-Industrial Park.

RECORD HILL WIND PROJECT, Roxbury, ME. Visual Impact Assessment for a 22 turbine wind project submitted to MEDEP.

DOWNEAST LNG, Robbinston, ME. Visual Impact Assessment for LNG terminal submitted to Maine DEP for Downeast LNG, Inc.

METHUEN COMPRESSOR STATION, DUKE ENERGY, Methuen, MA. Created 3D Model and photosimulations to illustrate visibility of proposed project and possible buffering options.

BLACK NUBBLE WIND PROJECT, Redington Township, ME. Visual Impact Assessment and photosimulations of proposed 18 wind turbines as seen from various viewpoints, including the Appalachian Trail, for Maine Mountain Power.

PROFESSIONAL LICENSURE

Maine Licensed Landscape Architect #2265
New Hampshire Landscape Architect #123
CLARB Certified

EDUCATION

BSLA Cornell University
Denmark International Study Program

SPECIAL TRAINING

- MaineDOT LAP Certified
- MeDEP Low Impact Development Stormwater BMP training
- Courses in ADA standards, Complete Streets, Sustainable Sites (ASLA LEED equiv)
- National Park Service Scenic Inventory Methodology workshop, ATC Conference, Colby College, 2017

PROFESSIONAL EMPLOYMENT

1992 - present Terrence J Dewan & Associates
Landscape Architects & Planners
Yarmouth, ME

1990 Summer Roger Trancik, FASLA,
Ithaca, NY

1988 - 1992 Bell & Spina Architects
Camillus, NY

PROFESSIONAL ORGANIZATIONS

Chairperson/Treasurer for the Maine Section of the American Society of Landscape Architects, 2002 - present

Consultant to Portland Trails Land Trust for the Schoolyard Greening Initiative, 1999 - present.

AWARDS AND DISTINCTIONS

American Society of Landscape Architects
Merit Award for Communications
Los Angeles River Study.

American Society of Landscape Architects
Merit Award for Communications
Chattahoochee River Greenway, Atlanta, GA.

National Association for Interpretation
Interpretive Media Award
Great Bay National Estuarine Research Reserve,
Sandy Point, NH.

PRESENTATIONS

Co-Presenter, Using Photoshop as a Design Tool,
ASLA, Portland, OR 1998

Co-presenter at LABASH, Creating Visualizations
with Computers, University of West Virginia, 1998

Co-Presenter, Creating Visualizations with
Computers, AEC Conference, Philadelphia, 1997

RICHMOND COMPRESSOR STATION, MARITIMES AND NORTHEAST PIPELINE, Richmond, ME. Photosimulations and buffer plan for the Pitts Center Road compressor station.

BYPASS VISUALIZATIONS, Wiscasset, ME. MEDOT. Photosimulations of proposed Route One bypass options. Images used for evaluation of options, public meetings, and website.

BATH IRON WORKS, NAVAL SECURITY PLANNING, Bath, ME. New security access, fencing and parking lot improvements.

BATH IRON WORKS, LAND LEVEL TRANSFER FACILITY, Bath, ME. Visual Impact Assessment and photosimulations for BIW's new shipbuilding facility on the Kennebec River.

WASHINGTON STREET PLANTINGS, Bath, ME. Bath Iron Works was required for LLTF permitting with City and State to develop site specific buffer and enhancement plan for Washington Street.

DRAGON PRODUCTS, Thomaston, ME. A landscape enhancement plan for a one-mile stretch of coastal Route One adjacent to a large open pit mine.

SADDLEBACK MOUNTAIN, Rangeley, ME. National Park Service. Photosimulations of ski area expansion plans to show potential impact on Appalachian Trail.

NEW ENGLAND WIND ENERGY STATION, Boundary Mountains, ME. Kennetech Windpower, Livermore, CA. Visual Impact Assessment and photosimulations for an industrial scale wind energy facility planned for 250,000 acres in western Maine.

SAWYER ENVIRONMENTAL LANDFILL, Hampden, ME. Photosimulations of landscape treatment and landform adjustments for the expansion of a highly visible landfill adjacent to the Maine Turnpike.

LIQUEFIED NATURAL GAS FACILITY, Wells, ME. Visual impact assessment and photosimulations of a proposed LNG tank in rural Wells.

VISUAL RESOURCE ASSESSMENT, RT. 27 Carrabassett Valley, ME, MEDOT. Visual resource assessment and improvements to one of Maine's Scenic Byways.

HALLOWELL INTERPRETIVE TURNOUT, MEDOT. Lead design team in production of construction documents for the first turnout to be installed along the Kennebec Chaudière Corridor. Site includes interpretive panels, railing, seating and paving, and landscaping.

KANCAMAGUS SCENIC BYWAY, WHITE MOUNTAIN NATIONAL FOREST, Conway to Lincoln, NH. Preliminary Facilities and Interpretive Media Plan. Redesigning Cleveland Digitally, Cleveland, OH. Site planning and computer illustrations for a former mill site in Cleveland. Presented at the 1995 Annual Meeting of ASLA.

LOS ANGELES RIVER STUDY, Los Angeles, CA. A study of aesthetic treatments for the 50-mile concrete channel lining the Los Angeles River. Illustrations of murals, parks, walkways, and gardens. Presented at the Computer Design Charrette at the 1996 ASLA Annual Meeting.

CHATTAHOOCHEE RIVERWAY, Atlanta, GA. A Landscape Architecture Foundation-sponsored project to improve public access along a 12-mile river corridor and reclaim adjacent industrial sites for recreation and open space.