

A collage of four diamond-shaped images: a substation with power lines, a high-voltage transmission tower, an offshore wind turbine, and a solar panel array.

POWER DELIVERY PROFILE

EMPOWERING ENERGY SOLUTIONS
FOR THE FUTURE...TODAY

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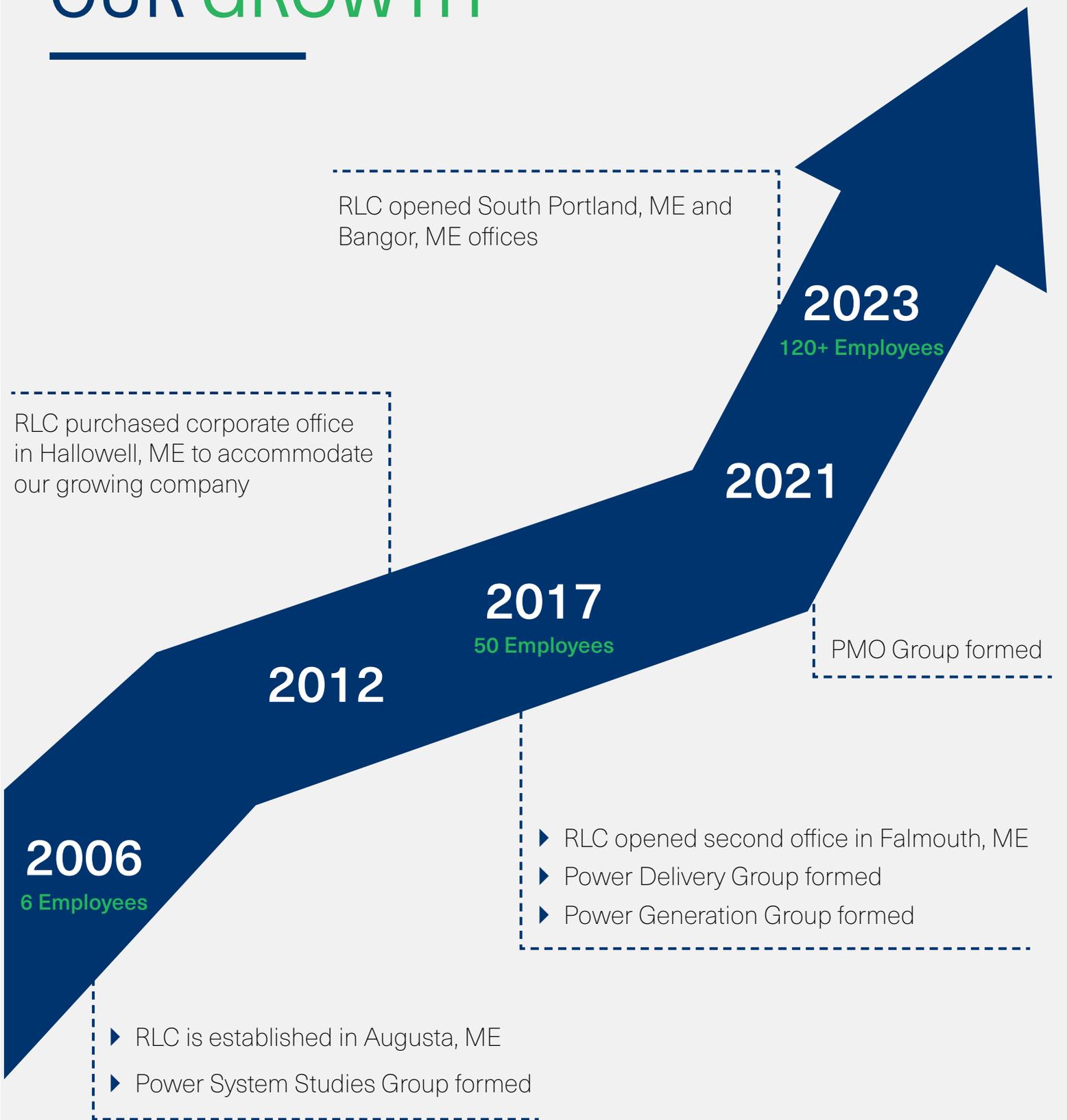
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OVERVIEW & BACKGROUND

RLC Engineering, PLLC (RLC) is an engineering consulting firm located in Maine, offering a full range of services in the electric utility and renewable generation engineering fields, from conceptual planning to final commissioning. RLC opened its corporate office in 2006 in Augusta, Maine and has experienced steady growth and success since. Its customers range from electric utilities, regional grid operators, renewable energy developers, and contractors of electric grid infrastructure projects.

OUR MISSION

To provide professional engineering consulting services and innovative solutions for our clients, while providing an enriching work environment that encourages personal development and job satisfaction for our employees.

CORE VALUES

RLC's core values are the foundation of our culture. They are genuine, thoughtful values that guide our employees to work towards the same goals and support the company's vision and shape our culture.

WHO WE ARE

RLC's team of more than 120 technical professionals provide innovative engineering solutions, tailored to fit our client's specific needs. Our engineers bring extensive experience in the study, planning, and design of complex power systems, understanding the need for efficiency, flexibility, resiliency, attention to detail, and value of time and money invested.

OUR CORE SERVICES

RLC provides fully engineered solutions including planning, feasibility studies (site selection, utility interconnections, cost estimating), detailed design, interconnection applications, permitting, and power generation facilities, and industrial plants.

With our comprehensive range of services, RLC will provide expert consulting and engineering services to meet your technical, schedule, and budgetary requirements.

POWER SYSTEM STUDIES

- Transmission System Studies
- Distribution System Studies
- Interconnection Studies

POWER DELIVERY

- Substation Design
- Transmission Line Design
- Protection & Control
- Civil & Structural Design

POWER GENERATION

- Solar Generation
- Wind Generation
- Energy Storage
- Renewable Generation Studies
- Operations & Maintenance

POWER ENGINEERING

- Mechanical Design Services
- Energy Management
- Microgrid Design Support
- Power Distribution Design

POWER DELIVERY



- ✓ New and Rebuild Substation Design
- ✓ Electrical, Civil, and Structural Design
- ✓ Protection & Controls (Settings & Design)
- ✓ Automation & Integration
- ✓ Testing & Commissioning
- ✓ Right-of-Way Analysis
- ✓ Environmental Services and Geotechnical Studies Management
- ✓ Existing Overhead Line Ratings and Re-Ratings
- ✓ Distributed Energy Resources (DER)
- ✓ Line and Structure Rendering
- ✓ Line Constant Development
- ✓ Transmission Protection (Differential, Line, Transformer, Generator)
- ✓ Distribution Protection (Reclosers)
- ✓ Field Surveys of Electrical Facilities
- ✓ Cable Sizing
- ✓ Insulation Coordination

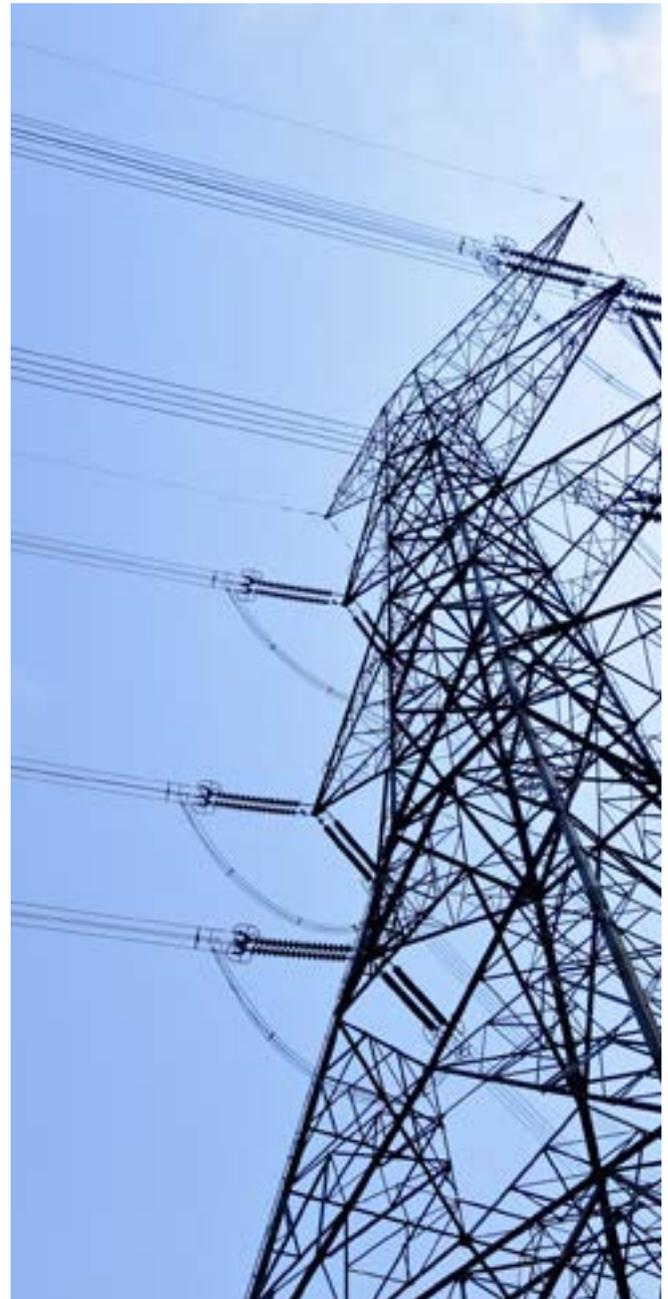
Over the years we have been privileged to work with electric utilities, regional grid operators, renewable energy developers and contractors of electric grid infrastructure projects across the Northeast, Mid-Atlantic, and Southeast regions offering a comprehensive package of engineering, design, and estimating services. Our engineers are familiar with each of our client's standards and maintain a high level of quality for all design-related projects. We leverage our design experience in combination with utilizing nationally recognized software to support our utility and energy developer clients.

TRANSMISSION LINE DESIGN SERVICES

Our expertise extends from distribution to transmission line design and standards. RLC provides transmission line design services from the conceptual level through detailed design for construction, including the development of construction and procurement specifications and bills of material.

SCOPE OF SERVICES

- New Line and Line Replacement Design, including Routing and ROW Width Evaluation
- Existing Overhead Line Ratings and Re-Ratings
- PLS-CADD Model Development of New or Existing Facilities Based on Available Data, including Survey and Drawings
- Structure Analysis and Design for Fiber Optic Additions
- Structure Replacement Design for Maintenance Work
- Coordination of Design Requirements with Major Structure Vendors
- Construction Support and Project Closeout, including Submittal Review and Record Drawings
- Plan and Profile Drawing Development
- Creation of Structure Assembly Drawings for Construction and Custom Pole Fabrication
- Structural Analysis and Design
- Existing Lattice Tower Evaluations and Reinforcements
- Foundation Analysis and Design
- Material and Construction Specifications
- Coordination of LIDAR Activities
- Coordination of Geo-technical Investigations
- Transmission System Lightning Arrestor Evaluations
- Transmission Line Rime Ice Mitigation
- Inspection and Evaluation of Transmission System Structures
- Overhead and Underground Transmission Line Development and Design
- Construction Inspections
- Support of ROW Real Estate Acquisition



SUBSTATION DESIGN SERVICES

Whether you need a conceptual bid package or completed for construction documents, our engineers are able to plan, specify, and perform all aspects of preliminary and detailed engineering for transmission, distribution or interconnection substations. Our engineers can plan, specify, and perform all aspects of preliminary and detailed engineering for transmission, distribution or interconnection substations. Our engineers assist clients in navigating from the conceptual stage into the preliminary stage to include final design as well as through material procurement, construction and final commissioning. We perform detailed project designs, develop material purchasing and construction service specifications, and produce designs for transmission, distribution and auxiliary systems.



SCOPE OF SERVICES

- Substation Rebuild Design (modifications, additions and upgrades to existing substations) and new Substation Design:
 - Electrical, Civil and Structural Design
 - Protection (Settings & Design)
 - Automation & Integration
- Studies:
 - AC/DC Station Services
 - Arc Flash
 - Direct Stroke (lightning)
 - Insulation Coordination
 - Grounding
- Transmission System Interconnection Requirements
- Site Selection, Planning and Permitting Support
- Environmental Services and Geotechnical Investigation Management
- Equipment and Project Specifications
- Construction Management and Inspection Support
- Testing and Commissioning Support
- Project Record As-Built Coordination

SOFTWARE APPLICATIONS

- Windows Based Integrated Grounding System Design (WinIGS)
- Visual Lighting
- SAGE-Timberline
- AutoCAD

CIVIL & STRUCTURAL DESIGN SERVICES

We offer complete civil and structural engineering services for substation and transmission projects. With extensive electric utility experience, our team has the unique knowledge necessary to provide safe, constructible and functional designs ensuring the reliability of your facility.

CIVIL ENGINEERING SERVICES

- Site development and stormwater management
- Access road design
- Secondary oil containment design

STRUCTURAL ENGINEERING SERVICES

- Steel and aluminum structure design
- Structure condition assessments, evaluations, and retrofits
- Steel lattice structure evaluations and retrofits
- Rigid bus design and finite element modeling
- Shallow and deep foundation design

CONSTRUCTION PHASE SERVICES

- Specifications, bid documents, and contracts
- Submittal review and RFI resolution
- Construction inspections
- Record drawings



PROTECTION & CONTROL SERVICES

The modernization of the protective relay functions within the electric grid involves a knowledge of power systems and microprocessor based equipment to provide both safe and reliable operation. Legacy equipment replacement with state-of-the-art numerical relays represents a major sector of our business and capabilities. Our relay engineers and designers specify the proper equipment and set the new relays for secure and dependable operation. Our group is able to coordinate large areas of relay settings to minimize any misoperation and mitigate undesirable outcomes due to electrical system faults. We have created, reviewed, and approved protective relay settings for numerous relay types and applications and developed construction level control system designs for new and existing facilities.



SCOPE OF SERVICES

- Transmission Protection (Differential, Line, Transformer, Generator)
- Design (Relay Replacements, A&I – SCADA)
- Transmission System Coordination/Modeling (ASPEN, CYME, PSCAD)
- Distribution Protection (Reclosers)
- Line Constant Development
- PRC Compliance Analysis (PRC-024 thru 27, etc.)
- Distributed Energy Resources (DER)
- Studies (DG, Facilities, Short Circuit, Arc Fault, Grounding)
- Standards Development (61850, 67N)
- Specification Development (Panels, Major Equipment)
- Testing and Commissioning
- OE Support (Design, Project Management)
- Estimating

AUTOMATION & INTEGRATION SERVICES

We offer a complete package of Automation & Integration (A&I) services, ranging from simple Remote Terminal Unit (RTU) replacements or additions to comprehensive substation Human-Machine Interfaces (HMI) and fully integrated substations. We have experience with a variety of vendor platforms and operating practices, along with the tools and skills needed to develop, test and commission your application. We also provide an impartial evaluation of vendors and equipment to meet each client's unique specifications and needs.

PLANNING & DESIGN

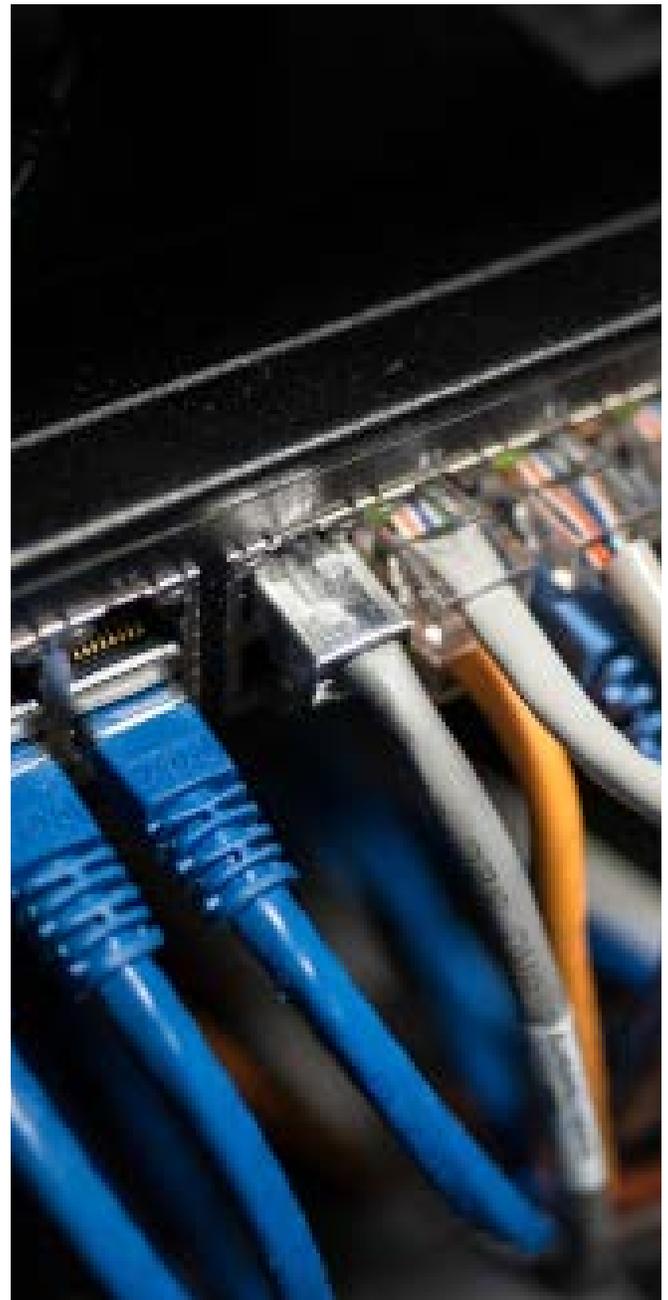
- Communications Network Design
- Automation & Integration Schemes
- Communications Diagrams
- Remote Engineering Access
- IED Data Maps
- SCADA Data Sheets
- Interface to EMS
- Interface to Regional Planning Coordinators, such as PJM or ISO-NE
- Most Utility Standard Protocols

PROGRAMMING

- HMI & SCADA Systems
- Substation Data Concentrators
- Remote Terminal Units (RTU)
- Programmable Logic Controllers
- IONs, SATECS, Bitronics Meters, INCONs, Beckwith M2001C&Ds, GPS Clocks, Qualitrol Xfmr Monitors

SUPPORT

- Onsite Testing & Support
- Testing with EMS Center
- Simulation/Bench Testing of SCADA Software Applications (before implementation in the field) to Reduce Delays during Construction and Implementation
- Factory Acceptance Testing



POWER DELIVERY EXPERIENCE



SUBSTATION DESIGN

With today's ever-changing energy demands, the grid must evolve to support all of the technological changes occurring in the transmission and distribution of electric power. Substations are at the forefront of that evolution. Our industry-leading design, construction and commissioning experience, implementation of the latest standards and utilization of the most advanced design tools, enable our technical teams to consistently create safe, innovative, cost-efficient and reliable solutions for our clients. Our design skills include civil/structural, electrical, protection and controls, automation and integration and communication networking. In addition to design, RLC is experienced in estimating and support services i.e. owner's engineer, maintenance and operations, construction, and testing & commissioning.



TRANSMISSION & DISTRIBUTION DESIGN

The transmission and distribution grid's aging infrastructure requires an innovative approach to providing reliable upgrade solutions. Our industry-leading design, construction and commissioning experience, utilization of the latest standards and most advanced design tools, enable our teams to create safe, innovative, cost-efficient and reliable solutions for our clients. Our design capabilities include new line replacements, structure analysis and design, foundation analysis and design and underground systems design. RLC is also experienced in LIDAR coordination, material and construction specifications, line inspections, EPRI structure repair prioritization analysis, plan and profiles, lattice tower evaluations, creation of structure assembly drawings for construction and custom pole fabrication.

POWER DELIVERY EXPERIENCE

PROTECTION & CONTROL

Today's transmission and distribution grid is under the constant pressure of being compromised. The urgency to replace legacy equipment with state-of-the-art high-speed secure electronic systems continues to accelerate. Our industry-leading design, construction and commissioning experience, utilization of the latest standards and most advanced design tools, enable our teams to create safe, innovative, cost-efficient and reliable solutions for our clients. Our design experiences include relay replacements, traditional and 61850 Brownfield/Greenfield control systems, settings, area studies/coordination, and SCADA. RLC is experienced in standards development, equipment specifications, PRC studies, testing and commissioning, maintenance and operations, construction, and owner's engineering support.



CIVIL & STRUCTURAL DESIGN

Severe storms, earthquakes, and other environmental events are placing a seemingly increasing strain on our infrastructure, including substations. Ensuring that substations are engineered for reliability and resilience in the face of such events is critical to maintaining and restoring electric service. Our team has extensive engineering and construction experience in all civil and structural aspects of substations. Our focus is providing safe, reliable, and functional designs. RLC's design capabilities include siting, grading and drainage, buildings and structures, rigid bus analysis, foundations, and secondary oil containment. Our experience also includes design support for GIS and STATCOM facilities.



POWER DELIVERY EXPERIENCE

TRANSMISSION LINE DESIGN

VOLTAGES 12.47 kV – 345 kV

50,000 STRUCTURES

Reviewed/Designed for Repair/Replacement

500 MILES

Line Replacement Design

SUBSTATION DESIGN

VOLTAGES 4.16 kV – 345 kV

150 SUBSTATIONS

Greenfield/Brownfield Designs
Solar, Wind, Battery System Designs

COST ESTIMATING

Transmission and Distribution Line
Substation

FACILITY STUDIES

PROTECTION & CONTROL

150 PROJECTS

1,100 RELAY REPLACEMENT DESIGNS

61850 EXPERIENCE

OE SUPPORT

Program Deployment, 61850, 67N Standards
Development

A&I SCADA DESIGN AND SUPPORT

CIVIL & STRUCTURAL DESIGN

VOLTAGES 4.16 kV – 345 kV

150 SUBSTATIONS

Existing and New Facilities
Site Development and Structural

PROJECT MANAGEMENT ORGANIZATION

At RLC, great project management is more than just cost, schedule, quality, and scope. Building relationships and trust with our clients are critical elements to ensure a projects successful execution. RLC's project managers utilize a variety of skills to effectively perform their jobs through communication, planning and forecasting, scheduling and time management, budgeting, technical expertise, risk management, and problem-solving, to ensure our clients success.

Projects are often complex and involve numerous stakeholders, having a project manager in place is essential to make certain projects start on time, stay within budget, and meet expectations. Our project managers are highly experienced with the leadership capabilities to effectively guide, manage, and support our clients. They are experts in utilizing best practices and have a clear understanding of the various processes required for the successful implementation and completion of any project.

We partner with clients to ensure projects are completed on-time and under budget.

Our project management team has experience in the following areas:

- Leading the Planning of and Successful Execution of Projects
- Project Scheduling
- Earned Value Management (EVM)
- Financial Planning and Cost Controls
- Contract Management
- Quality Assurance and Quality Control
- Risk Assessment and Management
- Project Communication Plan
- Resource Staffing Plans



BENEFITS

RLC's PMO team has developed procedures and best practices required for the successful implementation and completion of any project and is devoted to ensuring consistency, efficiencies, and better management of costs.

CLIENT REFERENCES

RLC is extremely proud of our established reputation with our clients. Please feel free to contact the following references regarding our performance and services.

POWER SYSTEM STUDIES

Josh Castonguay, VP & Chief Innovation Officer
Green Mountain Power
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Deb Manning, Sr. Transmission Planning Engineer
Versant Power
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E-mail: Deborah.Manning@versant.com

Megan Sullivan, Manager of Transmission Planning
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POWER DELIVERY

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Eversource Energy
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Michael Wilkins, Manager - Substation Engineering
Eversource Energy
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E-mail: Michael.Wilkins@eversource.com

POWER GENERATION

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Cianbro Corporation
Phone: 207-838-8162
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Todd Presson, Chief Executive Officer
Jay Cashman, Inc.
Phone: 617-890-0600
E-mail: TPresson@jaycashman.com

Christopher Reino, Senior Project Manager
Eversource Energy
Phone: 413-727-2845
E-mail: Christopher.Reino@eversource.com

Integrity and accountability are what drive our highly experienced engineers. We provide our clients with reliable innovative engineering solutions, tailored to fit their specific needs. We have had the privilege to work with utilities throughout the Northeast, independent system operators, and solar and wind developers all across the Northeast, Canadian Maritimes, and beyond.

"We believe in providing our customers with the most reliably engineered planning and design to accommodate the energy demands of today's world."

-Rick Conant

OUR CLIENTS

- Avangrid
- Borrego Solar
- Central Maine Power Company
- Cianbro Corporation
- CS Energy
- C2 Omega
- Discovery Wind and Solar Energy
- Dominion Energy
- Eversource Energy
- FirstLight
- Great River Hydro
- Green Mountain Power
- ISO New England
- Longroad Energy Partners
- MYR Group
- National Grid
- Nexamp
- NextEra Energy
- Norwich Solar Technologies
- Versant Power

MANAGER BIOS

RICK CONANT, PE – MEMBER-MANAGER

As the Member-Manager and Founder of RLC Engineering, Rick offers utility providers and developers a rich background in power system studies and power delivery engineering excellence. With over 30 years of experience in the electric utility industry, Rick provides clients with a diverse knowledge of power system operation from both a planning and operational perspective in tandem with exceptional professional engineering.



BRIAN CONROY, PE – MANAGER OF POWER SYSTEM STUDIES

Brian oversees transmission and distribution system planning and operational studies for electric utilities, grid operators and energy developers. With over 33 years of experience in the electric utility industry, Brian and his team are prepared to assist utilities and developers interconnecting to the power grid with the most trustworthy power system studies to maintain the security and dependability of the electric grid. Brian is a senior member of IEEE.

PHIL NADEAU, PE, PMP – MANAGER OF POWER DELIVERY

Phil has over 30 years of professional experience in the utility and manufacturing industries and works alongside both our clients and our in-house team from a project's initial concept to final commissioning. Phil is well-versed in the management of all project phases including development, planning, execution, monitoring, controlling and closeout of utility-based capital investment projects with a primary focus on creating industry-leading quality output.



JON GAY, PE – MANAGER OF POWER GENERATION & ENGINEERING

Jon has over 16 years of comprehensive experience in the electrical distribution and generation industry dedicated to Distributed Energy Resource (DER) interconnection, utility distribution engineering consulting, industrial and commercial distribution design, and construction management. Jon and his team provide in-depth knowledge of electrical systems and provide cost-effective solutions to power system operators.

JOHN JOYCE, PMP – PMO MANAGER

John has over 30 years of experience in the electrical utility industry in the areas of engineering, construction and project management. John leads a team of project managers and works in close collaboration with RLC clients in all segments of a project from scheduling, to finance, to engineering, to construction. John ensures that RLC's company standards are upheld, while also assuring excellent client satisfaction in delivering quality engineering services in a timely and cost-effective manner.



JUSTIN DODD, PMP – MANAGER OF BUSINESS DEVELOPMENT

Justin has over 17 years of combined experience in the energy and utilities markets. As Business Development Manager, Justin brings a wealth of expertise in driving business growth through strategic planning with hands-on execution, client relationship management, and innovative solutions. Justin is a registered PMP.

PRINCIPAL ENGINEERS

POWER SYSTEM STUDIES

- KWAME ANDOH
PRINCIPAL POWER SYSTEM ENGINEER
- DAVE CONROY, PE
PRINCIPAL POWER SYSTEM ENGINEER
- DAVE GREEN
PRINCIPAL POWER SYSTEM ENGINEER
- DAN LEWIS
PRINCIPAL POWER SYSTEM ENGINEER
- LEIGH PAINE
PRINCIPAL POWER SYSTEM ENGINEER
- MIKE POULIN
PRINCIPAL POWER SYSTEM ENGINEER

- HEATHER ROBERTS, PE
PRINCIPAL POWER SYSTEM ENGINEER
- TAMMY ROBERTS, PE
PRINCIPAL POWER SYSTEM ENGINEER
- BOB RUSSO, PE
PRINCIPAL POWER SYSTEM ENGINEER
- ASA SPROUL, PE
PRINCIPAL POWER SYSTEM ENGINEER
- WAINE WHITTIER, PE
PRINCIPAL POWER SYSTEM ENGINEER

POWER DELIVERY

- CHRIS BENNETT, PE
PRINCIPAL PROTECTION ENGINEER
- CRAIG LAKIN, PE
PRINCIPAL PROTECTION ENGINEER
- CHRIS LYONS, PE
PRINCIPAL CIVIL ENGINEER

- JUSTIN MACDONALD, PE
PRINCIPAL ELECTRICAL ENGINEER
- CRAIG PERREAU, PE
PRINCIPAL CIVIL ENGINEER
- PAUL VILLENEUVE, PE
PRINCIPAL PROTECTION ENGINEER

POWER GENERATION

- JOSÉ DONNELL, PE
PRINCIPAL ELECTROMECHANICAL ENGINEER
- DAVE ESTEY, PE
PRINCIPAL ELECTRICAL ENGINEER
- TEDD GIFFORD, PE
PRINCIPAL ELECTRICAL ENGINEER

- JOHN MILLER, PE
PRINCIPAL POWER SYSTEM ENGINEER
- AMAM ONWUACHUMBA, PHD, PE
PRINCIPAL POWER SYSTEM ENGINEER

For complete principal bios, please visit our website at www.rlc-eng.com



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