



# POWER ENGINEERING

Our Power Engineering team is comprised of key employees with extensive energy backgrounds and Certified Energy Management experience. They encompass decades of design, cost estimating, and project management engineering experience. With this service, we address the rapidly evolving power management opportunities with commercial and industrial consumers of electrical and thermal energy. RLC combines its unique understanding of this environment with prospective institutional and industrial clients' needs for efficient energy use and improved energy security.

## ENERGY MANAGEMENT

- Conceptual Design
- Probably Cost Studies
- Construction Support Services
- Owner Engineer Services
- 3rd Party Reviews
- Post Construction Project Performance Review

## MECHANICAL DESIGN

- Fully Designed System Installation
- Electrical and Mechanical Equipment Specifications
- Piping Stress Analysis
- Hydraulic and Pump Designs
- CHP/Cogeneration/Utility Plant Retrofit

## MICROGRID DESIGN SUPPORT

- Microgrid planning for Load Demand and Grid Forming Operational Configurations
- Renewable Generation Sizing (PV, Wind, Battery Storage, Fuel Cell), Design, and Interconnection
- Backup Synchronous Generator Sizing, Design, and Interconnection
- Transformer Inrush, Cold Load Pickup, and Transient Assessments while Grid Forming
- Protection and Control Design and Coordination for all Microgrid Operational Conditions

## POWER DISTRIBUTION DESIGN

- Planning Studies for Thermal Capacity and Voltage Profiles for Sustained Load Growth
- Short Circuit Analysis for Breaker Interrupting and Equipment Withstand Assessments
- Detailed Engineering Design of Industrial Power and Medium Voltage Campus Power
- Interconnection of Generation Systems, Feasibility Studies
- Specification Development of Transformers, Medium Voltage Breakers, Reclosers, Switchgear, and Switches
- Protection and Control Engineering for Coordinating Fuses, Breakers, Relays, and Switching Schemes
- Arc Flash Studies to Assess Incident Energy and Shock Hazards
- Power Quality Assessments for Voltage Flicker, Harmonics, and Adverse Voltage Impacts



**EMPOWERING ENERGY SOLUTIONS**  
for the future...today

V 207.621.1077 | F 207.621.1177  
INFO@RLC-ENG.COM | RLC-ENG.COM  
HALLOWELL | SOUTH PORTLAND | BANGOR