

CHRISTOPHER L. RODERICK, P.E.

EDUCATION

B.S. – Mechanical Engineering, University of Maine, 2017

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS

Professional Engineer – Alabama, Illinois, Maine, Mississippi, North Carolina, Texas, and Vermont

EMPLOYMENT HISTORY

2024 to present – Sevee & Maher Engineers, Inc., Cumberland, Maine, Principal Substation Engineer
2017 to 2024 – SGC Engineering LLC, Augusta, Maine, Senior Substation Engineer

PROFESSIONAL EXPERIENCE

Mr. Roderick is a licensed professional engineer with over seven years of experience in substation design in the renewable energy and utility markets, including systems ranging from 12kV up to 345kV, and low voltage design for control enclosures and equipment wiring. His specification and design experience with low voltage AC & DC power service equipment and components includes, but is not limited to, panelboards, manual and automatic transfer switches, disconnect switches, switchgear, and meters.

As a substation design engineer, Mr. Roderick performs the following services:

- Lead engineer and designer for substation physical designs, from concept through construction and as-built
- Factory Acceptance Testing (FAT) for low voltage control enclosures
- Cross-discipline reviews to ensure consistency throughout design phases
- Technical analyses/studies and reports with detailed findings and relevant project implications
- Interface directly with clients and contractors to provide timely and technically sound support and design solutions
- Develop engineering cost estimates and proposals for project budgets of \$500,000 or more
- Conduct studies for AC & DC load, grounding, and short circuits; reactive compensation and power flow analysis; underground cable sizing; and lightning protection analysis, and
- Project management, including team coordination, maintaining project schedule, budget and change order tracking, and billing.

Representative projects in his areas of expertise include the following:

- **EDP Renewables, Azalea Springs Solar, Angelina County, Texas** – Overall project manager and technical lead for the substation design scope on the new 207MW, 34.5/138kV Solar Farm Collector substation. Responsibilities included multidisciplinary coordination, both internally and with multiple external contractors. Engineer of Record for both Physical and P&C substation designs.

- **EDP Renewables, Indiana Crossroads II, White County, Indiana** – Responsible for the physical design and drafting for the new 230MW, 34.5/345kV Wind Farm Collector substation. This included all above grade physical design package and the electrical in ground package. Tasks included, but were not limited to, general arrangements, equipment BOM's, conduit design, grounding design, AC and DC load studies, lightning and lighting studies, and bus calculations. Attended control house FAT & inspection.
- **APEX, Three Corners Solar, Benton, Maine** – Led the physical design and drafting for the new 120MW, 13.8/34.5/115kV solar farm collector substation. Tasks included all above grade physical design documentation and some in ground, as well as control house design, and bus calculations. Also performed underground cable sizing for 13.8kV cables.
- **EDP Renewables, Indiana Crossroads I, White County, Indiana** – Responsible for the physical design and drafting for the new 345MW, 34.5/345kV Wind Farm Collector substation. This included all above grade physical design and the electrical in ground package. Additional efforts included performing the reactive power and short circuit system studies and taking over the P&C design from 75% to as built. Attended control house FAT & inspection.
- **Central Maine Power Company, Owner's Engineer, various projects, Maine** – Provided Owner's Engineering Support for CMP projects. Represented CMP as a trusted technical resource for the review of above grade, conduit, and grounding designs. Reviewed and approved all aspects of the above grade details and material lists.
- **EDP Renewables, Rosewater I, White County, Indiana** – Performed the physical design and drafting for the new 115MW, 34.5/138kV Wind Farm Collector substation. Responsibilities included all above grade design and below grade electrical designs including general arrangements, steel drawings, equipment BOM's, conduit design, lighting and lightning studies, and bus calculations. Additional design responsibilities included AC and DC load studies, AC/DC schematics and equipment wiring diagrams. Attended control house FAT & inspection.
- **EDP Renewables, Crossing Trails I, Kit Carson County, Colorado** – Led the physical design and drafting for the new 115MW, 34.5/230kV Wind Farm Collector substation. Work included all above grade physical design documentation and some in ground including, but not limited to, General Arrangements, Conduit Plan, Grounding Plan, AC and DC load studies and Bus calculations. Design responsibilities include AC/DC schematics and equipment wiring diagrams.
- **EDP Renewables, Paulding IV, Paulding, Ohio** – Led the physical and protection and controls (P&C) design and drafting for a new 75.9MW, 34.5/138kV Wind Farm Collector substation. Work included all above grade physical design documentation and some in ground including, but not limited to, General Arrangements, Conduit Plan, AC and DC load studies and Bus calculations.
- **New York State Electric and Gas Company, Langner Road Substation, Lancaster New York** – Responsible for the above and below grade and System Protection and Controls (SP&C) 1-2 design work. Project scope included the replacement of eight 12.47kV breakers and upgrading the site's Supervisory Control and Data Acquisition (SCADA) system. Responsibilities included but were not limited to, steel modifications, conduit plan, grounding plan, electrical details, AC/DC schematics, single line and three-line diagrams and wiring.
- **Central Maine Power Company, Maine Yankee FAA Lighting, Wiscasset, Maine** – Developed the above grade and below grade design for installing and powering a new FAA lighting system on five 345kV transmission towers. Design included in ground and above ground conduit routing and installation details, AC system design, and voltage drop calculations.