

**OneLine Engineering** is a specialized power system engineering services provider with years of demonstrated experience. We provide complete services from project conception to project energization. Our success comes from providing hands-on detailed engineering services to our clients on a long list of challenging substation and power system upgrade and greenfield projects. We provide comprehensive engineering and drawing packages with the high level of detail needed by the field forces to successfully complete their work. Working with our EPC partners for years, and receiving continuous feedback from them, we fully understand the quality of services needed to get the job done safely, on schedule, and on budget.

We are currently seeking a **Senior Electrical Engineer** to join our team in **St. Catharine's, ON**.

## **CERTIFICATION**

Must be licensed to practice with the Professional Engineers of Ontario as a Professional Engineer (P.Eng.)

## **EDUCATION REQUIREMENTS**

Bachelor's degree or diploma in Electrical Engineering majoring in Electrical Power Systems or MSc.

## **THE POSITION**

Generally, 15 plus years work experience. Completes assignments independently and without supervision. Requires knowledge of more than one field of engineering or a high degree of expertise in his chosen field of specialization. Participates in short and long range planning; makes independent decisions on work methods and procedures within an overall program. Demonstrates sound judgment, originality, ingenuity, and in-depth engineering knowledge of principles for devising practical and economical solutions to engineering problems. Reviews and verifies accuracy and adequacy of the work of engineers under his supervision. Participates in the scheduling and organization of engineering projects. Mentors and trains other less experienced engineers, technologists and designers. Reviews, approves and stamp engineering drawings. May assume the responsibilities of a Project Manager and supervise a team of engineers, technologists and designers.

## **ESSENTIAL DUTIES & RESPONSIBILITIES:**

- Requires knowledge and familiarity of all electrical aspects of generation, power transmission and distribution substations, wind and solar farms collection systems and their connection to the grid, underground distribution, utilization of electrical plant in industrial environments and communications and System Control and Data Acquisition (SCADA) systems. Must be familiar with power system analysis techniques including a good working knowledge of symmetrical components. Must be familiar with the detailed electrical design of underground and overhead utility facilities, and the requirements of the Ontario Electrical Safety Code, the Canadian Electrical Code. Must possess excellent written and oral communications skills.
- Defines the conceptual design of substations and overviews and directs the development and preparation of substation designs including layouts, elevations, single line diagrams, three line diagrams, DC and AC control schematics, connection wiring diagrams, cable schedules, and raceway layouts, including cable trays, duct banks, cable trenches and bill of materials.
- Develops control and trip logic diagrams, relay protection settings and relay configuration files utilizing relay Vendors' configuration software.
- Undertakes or directs electrical power system studies including load flows, loss analysis, reactive compensation, short circuit, stability, and harmonics analysis; carries out power system protection coordination studies including production of inverse time curves, and arc flash hazard analysis studies using EasyPower software.

- Measures or arranges for ground thermal resistivity and ground electrical resistivity measurements at the project site.
- Performs or oversees the development of grounding system analysis and design using SES Engineering Multifields software.
- Determines underground cable current carrying capability using Cyme's CYMCAP software.
- Develops and directs the production of protection and control communications network architecture diagrams for the integration of protection relays and equipment statuses into the System Control and Data Acquisition (SCADA) systems normally used in utility systems.
- Must be familiar with electrical codes and standards, modern microprocessor controlled protection relays and their setting software, RTUs, modems, and their integration. Must also be familiar with the connection requirements of Hydro One, IESO and NPCC.
- Develops protection, control and trip logic philosophies and design descriptions.
- Performs engineering calculations to establish system criteria and major equipment design rating and parameters, such as transformer and cable size selection.
- Develops fiber-optic system design and integrates it with the underground plan.
- Prepares technical specifications for major electrical equipment, protection relay and RTU panels, and auxiliary systems in accordance with Customer requirements and the latest appropriate applicable standards.
- Reviews Vendor proposals, specifications and drawings.
- Participates in project Design Review Meetings, as required. Liaises and coordinates with the client to ascertain requirements and project progress. Attends client meetings and site visits.
- Effectively and efficiently manages work time to ensure project completion to schedule and within budget. Works to ensure that the Company and Clients' confidentiality agreements are respected.
- When required, visits the project site to review the installation work to ascertain that it has been carried out per the designs and to provide site technical guidance and assistance during construction, testing and commissioning.
- Prepares the required documentation for the connection to the grid process such as testing and commissioning protocols, the Transmission Confirmation of Verification Evidence Report (COVER) and IESO Appendix 4 of Market Rules data submission forms requirements.
- Participates in the development of engineering procedures and standards, and contributes to OLE's paperless library.
- Prepares proposals and/or assists with the preparation of engineering proposals.
- Prepares reports.



- Carries out all duties in accordance with established procedures and those identified in the Company Quality Assurance Manual. Ensures proper electronic filing and traceability of project information.

**INTERESTED CANDIDATES:**

Interested candidates can forward their resume and cover letter including salary expectations to [applyonline@eptcon.com](mailto:applyonline@eptcon.com). We thank all applicants for their interest however only those selected for an interview will be contacted. OneLine welcomes all qualified applicants including those who are designated group members – Women, Visible Minorities, Indigenous Persons and Persons with Disabilities. Accommodations are available on request for candidates taking part in all aspects of the selection process.

To learn more about OneLine Engineering please visit our website at <http://www.onelineeng.com>.