

## POSITION DESCRIPTION

Position Description: **Senior Control Engineer**

Location: Wausau WI or Montreal QC

Reports to: General Manager

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### JOB SUMMARY:

- Design and implement governor, control and protection systems for electrical generation facilities

### REQUIREMENTS:

- BSEE / BSME with 7 years' experience with digital/hydraulic governors, excitation, protection, automation and SCADA systems for hydroelectric power plants
- Familiar with ASME, IEEE, IEC, NEC, and CSA standards applicable to the design of equipment for Power Generating Stations
- Hydroelectric power plant operations and equipment knowledge
- Strong conceptualization ability along with strong interpersonal, communication and organizational skills, including the ability to explain complex technical issues to decision-makers and project teams
- Ability to travel in excess of 30% domestically and internationally
- 4 core skills and 2 additional skills
- Able to perform all essential functions of the job

### DESIRABLE:

- Professional engineering registration or the ability to become registered

### ESSENTIAL FUNCTIONS:

- Commissioning of governor systems
- Commissioning of HMI systems
- Commissioning of hydraulic systems
- Commissioning of network systems
- Commissioning of unit control systems
- Design cut-ins for governor retrofits electrical
- Design cut-ins for plant control electrical
- Design cut-ins for unit control electrical
- Design DEP systems
- Design electrical schematic diagrams
- Design external electrical wiring diagrams
- Design field instrumentation systems
- Design functional elementary drawings
- Design HMI systems
- Design internal panel wiring drawings
- Design PLC drawings
- Design PLC programs
- Design, develop, test and start up projects as requested
- Determine features to replace existing governor systems
- Develop customer training documents
- Develop descriptions of system operation
- Develop hardware I/O List
- Ensure effective information handoffs
- Ensure system engineering is complete prior to handing off work for detailed engineering and design
- Interpret electrical drawings
- Interpret mechanical drawings
- Interpret technical project specifications as required by sales and engineering project management
- Minimize rework and warranty on all projects
- Perform demolition and installation engineering

- Perform design reviews
- Perform electrical calculations for system sizing and component selection
- Perform FAT, installation supervision, SAT, customer training and system commissioning as requested
- Perform onsite inspections and project “kick-off” meetings as assigned
- Prepare O&M manual, factory acceptance test (FAT), installation, site acceptance test (SAT) and customer training documents
- Provide HMI conceptual system engineering
- Provide installation conceptual system engineering
- Provide plant control conceptual system engineering
- Provide unit control conceptual system engineering
- Support Engineering division as requested
- Troubleshoot PLC based control systems
- Utilize electrical and hydraulic test equipment
- Utilize L&S Electric ISO system to ensure quality products and services
- Work effectively with all other project team members such as control, electrical, HMI and mechanical disciplines
- Work with designers to develop drawings

**OTHER REQUIREMENTS:**

- Ability to confidently correspond with customers via oral and written means
- Ability to travel to Canada
- Ability to work independently and in a team environment with minimal supervision
- Able to wear personal protective equipment; hearing protection, hard hat, safety glasses, etc.
- Able to work for any employer in the United States
- Be a self-starter, effectively perform duties without guidance
- Display a positive can do attitude
- Excellent customer relations skills
- Fluent in English language
- High level organizational skills with ability to set priorities, manage multiple deadlines and work under pressure
- Possess a strong attention to detail
- Possess strong electrical and mechanical aptitude
- Proficient use of personal computer, operating knowledge of Microsoft Word, Excel and Project
- Shall sign L&S Electric confidentiality agreement
- Shall work as required to complete work requirements
- Simultaneously execute multiple projects
- Strong communication skills, ability to correspond confidently with customers and project team
- Valid driver’s license, able to be insured
- Valid passport or ability to obtain one
- When on call, respond to customer service calls 24 hours a day, 7 days a week
- Willingness to learn new skills and approaches to dealing with problems
- Work effectively as an individual and in a team environment

**WORKING CONDITIONS:**

- Aerial work may sometimes be necessary
- Core working hours start at 8AM unless prior approval given. Eight (8) working hours per day are required. Overtime requires prior approval.
- Environmental conditions vary from facility to facility (i.e. heat, noise)
- Occasional lifting of heavy objects
- Uneven or slippery walking surfaces
- Work from assigned L&S office unless prior approval given
- Work is performed at the customer jobsite as well as at L&S Electric facilities.

Reviewed and Accepted by:

Employee Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Manager Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_