



EMPLOYMENT OPPORTUNITY

Closing Date: 2023/11/21

PROTECTION DESIGN ENGINEER (Electrical Engineer)

Winnipeg, MB

Manitoba Hydro is consistently recognized as one of Manitoba's Top Employers!

Great Benefits

- Competitive salary and benefits package.
- Defined-benefit pension plan.
- Nine-day work cycle which normally results in every other Monday off, providing for a balanced approach to work, family life and community.
- Flex-time and partially remote work schedule (providing the option to work remotely 3 days per 2 week period), depending on nature of work, operational requirements and work location.

Manitoba Hydro is a leader among energy companies in North America, recognized for providing highly reliable service and exceptional customer satisfaction. Join our team of Manitoba's best as we continue to build a company that supports innovation, commitment and customer service.

We are seeking a Protection Design Engineer to join our Station Design Department. Under the general direction of the Senior Protection Design Engineer, responsible for the design and procurement of protection systems for Manitoba Hydro transmission, distribution, and HVDC converter station projects.

Responsibilities:

- Design protection systems to protect Manitoba Hydro stations, transmission lines and distribution in such a manner as to obtain the optimum degree of system security and reliability of service, and with regard for operating requirements.
- Prepare protective relay reports describing the relaying and communications required to provide the necessary protection and describing operation of the system for other user departments.
- Prepare scope of work and estimate for protection design project activities.
- Coordinate project protection requirements and activities with senior staff in other departments.
- Perform computer studies to determine the system behavior under fault conditions and carry out specialized studies related to new protection schemes and their suitability for usage. Determine relaying concepts and functionality required for proposed system changes.
- Procure protective relays and related equipment using established corporate processes including open tender (MERX), purchasing agreements, 3 Bids and a Buy (3BB), and VISA.
- Prepare technical specifications for the purchase of complex protection systems, analyze tenders and initiate recommendation for their purchase. Follow-up includes the review and approval of manufacturers' documentation and design (including hardware, software and functionality), determining and assisting with shop or field tests, and liaison with suppliers as required.
- Assist with designs for Remedial Action Schemes (RAS).
- Advise planning and design personnel in the development of station layouts, apparatus requirements and station configuration with regard to protection considerations and advise on the requirement of current and voltage transformers for relaying and metering.
- Provide consultation to other design groups on the application of relays into detail station designs, including relay connections, test facilities, and interlocking requirements, as well as station integration aspects.
- Coordinate evaluation of new relay products for application in protection designs, working and negotiating with other departments and suppliers as required to resolve problems, and ensure documentation of all necessary information.
- Provide training and work guidance as required to other staff on projects and in areas of expertise.
- Perform other related duties and assignments as required.

"Principal Duties are intended to be an accurate reflection of the main duties essential for this position. They are not designed to be an exhaustive list of all duties, tasks and responsibilities."

Qualifications

- Graduate in Electrical Engineering from a University of recognized standing with a minimum of six years related experience in power system protection, control circuits and power system analysis.
- Membership in Engineers Geoscientists Manitoba (EGM).
- Working knowledge in electromechanical, solid state and digital relay technology and applications on ac system protection including transmission lines and feeders, bus protection, transformer protection, capacitor and reactor banks, AC filter bank protection and breaker fail protection.
- Working knowledge of communication technologies for protection system applications such as Power Line Carrier, micro-wave, fiber optic, and relay-to-relay communication protocols.
- Working knowledge of IEC61850 standard and its application to protection systems (GOOSE messages, MMS, Sampled Values).
- Working knowledge of major substation apparatus and substation control and automation systems including the ability to read and understand detailed design drawings and equipment nameplates.
- Working knowledge with the solution of power system problems using specialized analytical software tools.
- Basic understanding of the Manitoba Hydro power system and procedures used in its operation and maintenance.
- Demonstrated capability at effectively communicating both orally and in writing.
- Demonstrated ability to provide guidance and technical assistance to others.
- Tactful, diplomatic, and demonstrated ability to work with others.
- Experience in design and procurement and in coordination of overall project processes.
- Demonstrated initiative in handling involved and complex technical problems.

Salary Range

Starting salary will be commensurate with qualifications and experience. The range for the classification is \$44.82 - \$61.88 Hourly, \$85,889.18 - \$118,580.54 Annually.

Apply Now!

Visit www.hydro.mb.ca/careers to learn more about this position and to apply online.

The deadline for applications is NOVEMBER 21, 2023.

We thank you for your interest and will contact you if you are selected for an interview.

This document is available in accessible formats upon request. Please let us know if you require any accommodations during the recruitment process.

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