



EMPLOYMENT OPPORTUNITY

Closing Date: 02.04.2024

HVDC PERFORMANCE 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.

Under the consultative direction of the System Performance Department Manager, will supervise, coordinate, and provide engineering leadership to the HVdc Performance section. The main responsibility of which is to ensure the corporation meets system operating requirements and industry-wide security and reliability operating requirements associated with the HVdc system performance and control, studies, analysis, and protection. Will also provide technical support and guidance for HVdc studies hardware, software, and models such as PSCAD, FDHAP, RTDS, PSS/E, DSATools, and similar. Will lead studies, analyze, and prepare suitable metrics focused on HVdc sustainment and integration of the various stages of modernization.

Responsibilities:

- Direct and coordinate system operating studies, system and data analyses and real-time assessments to ensure operating reliability and security requirements associated with the HVdc dc and ac side equipment are met.
- Lead a team that provides technical support and guidance for HVdc studies hardware, software, and models such as PSCAD, FDHAP, RTDS, PSS/E, DSATools, and similar.
- Set objectives for and direct studies related to the performance of the Nelson River system including dc transmission configurations, converter stations, the ac collector system, multi-line dc operation, dc parallel operation, control and protection functions, over voltage, and voltage control with existing and new techniques.
- Provide leadership and direction in the studies, analyse, and preparation of suitable metrics focussed on HVdc system sustainment and the integration of the various stages of HVdc modernization.
- Direct and oversee the preparation of normal, abnormal, and emergency operating guidelines associated with HVdc and dc/ac system interactions, considering such effects as self-excitation, harmonic resonances, switching surges, over-voltage protection, harmonic filtering, reduced voltage operation, valve current ratings, reliability, and reactive power supply.
- Direct and coordinate the analysis of HVdc involved system disturbances, determine appropriate trends, and recommend corrective measures in the form of operating guidelines, control and protection setting changes or changes to the HVdc system configuration.
- Coordinate recommended corrective measures with appropriate Manitoba Hydro stakeholder departments and where necessary neighbouring entities.
- Lead the analysis, interpretation, and resolution of system problems caused by ac and HVdc control systems, and protection systems.
- Initiate, plan, coordinate, direct and support system tests as required to help determine actual system behavior.
- Coordinate with other groups within the Corporation, external consultants, and suppliers and contractors on system protection & control (HVdc and HVac) activities to ensure that corporate requirements are met.

Qualifications:

- Graduate in Electrical Engineering from a university of recognized standing with a minimum of seven-years of experience in studying, analyzing, and making recommendations on the operation, performance, control, and protection of high voltage dc

systems, plus one-year additional training in power system analysis.

- Member in good standing with Engineers Geoscientists Manitoba.
- A Masters' degree and/or post-graduate courses in power system dynamics, power system analysis, control, and protection, HVdc systems, and FACTS devices would be an asset.
- In depth knowledge of the Manitoba Hydro interconnected power system, and the application of power system engineering simulation tools and techniques and specifically knowledge of their application in Manitoba Hydro.
- Demonstrated in depth knowledge of HVdc systems, generator and transmission control systems, and ac protection systems.
- Fully knowledgeable of customer service requirements as impacted by the design and operation of the power system.
- Demonstrated ability to analyze and solve complex and adverse technical problems effectively.
- Prepared to travel within and outside the province for inter-utility and related meetings.
- Possess a thorough knowledge of corporate policies, procedures, and regulations.
- Possess a valid Province of Manitoba driver's licence.

Salary Range

Starting salary will be commensurate with qualifications and experience. The range for the classification is \$52.99-\$72.60 Hourly / \$101,539.62-\$139,110.14 Annually.

Apply Now!

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

The deadline for applications is APRIL 2, 2024.

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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