Manitoba Hydro
energy for life

EMPLOYMENT OPPORTUNITY

Closing Date: 09.07.2024

PRINCIPAL EMS GENERATION 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.

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, while actively supporting a diverse, equitable and inclusive workplace.

We are seeking a permanent Professional Engineer to join our Control Centre Technology Systems Department in Winnipeg, Manitoba.

Responsibilities:

- Lead technical analysis, special tests, written reports, modeling and support that assist in the implementation of the EMS Generation (AGC) application, EAR, Automatic Reserve Share/Contingency Reserve Share Group implantation, reserve monitoring, and incorporation of renewables. Responsible for performing AGC system tuning, analysis, and troubleshooting of real-time generation issues.
- Lead the BAL standards initiatives for System Operations interfacing with Grid Infrastructure Planning, System Control, System Performance and Transmission Services and Compliance Departments. Responsible for performing NERC BAL standards engineering analysis, evidence collection, and data submittal to the NERC BASS system. Responsible for developing compliance processes, controls, and evidence collection pertaining to the BAL standards.
- Represent Manitoba Hydro on the North American Electric Reliability Corporation (NERC) Resources Subcommittee and Midwest Reliability Organization (MRO) NERC Standards Review Forum.
- Represent AGC and BAL standard requirements for System Operations at the MISO Contingency Reserve Share Group Subcommittee as a technical representative for System Operations. Represent Manitoba Hydro at the GE EMS and DST User Group meetings as the AGC generation expert.
- Responsible as Document Authority for System Operations generation technical documentation, which includes ensuring that the creation, ongoing revision, and updates to documentation are applied following any changes or additions to system applications ensuring alignment with NERC standards and operational requirements for efficiency and reliability. This includes, but is not limited to, Operating Procedures, EMS instructions, internal training guides and reference material that are used by the System Control, System Performance, Transmission Services & Compliance and Control Centre Technology Departments.
- Prepare formal reports, technical memorandums, develop new and/or improve existing analytics, and make recommendations for software and process improvements and troubleshoot and resolve problems pertaining to the advanced EMS engineering applications AGC, Operator Training simulator, Loadshed, advisory applications, and others.
- Lead and participate in the implementation of Energy Management System (EMS) technology roadmaps. Act as the main back up and participate in the development, collaboration and execution of System Operations Training technology roadmaps including Operator Training System (OTS), Dynamic OTS, Distribution OTS, and new operator training tools/environments.
- Key player in the development and support of training cases, scenarios, and conditions on the Operator Training Simulator for the training of the System Control Operators to meet the requirements of NERC's Operator Certification Program and the special power system operating conditions of Manitoba Hydro.
- As the main backup, responsible for supporting the activities on DSA Tools Training environment, WAMS Training environment and new EMS training tools, must stay up to date on all related activities.
- Provide technical coordination to staff involved in Generation, OTS, and other EMS related activities.
- Participate in system tests/verifications by analyzing application requirements, defining operation limitations, monitoring electrical quantities, and verifying results.

- Provide training for system operators and other staff on EMS applications.
- As required, interact with Manitoba Hydro's Reliability Coordinator, vendors, and external entities to collaborate, and extend knowledge to institute optimal power grid solutions.
- Represent Manitoba Hydro, as required on inter-utility study task forces and committees concerned with Advanced Power System Applications. Foster relationships and collaborate with internal groups and external entities to drive common goals and purposes, ensuring continual growth and improvement of the EMS.
- Respond to after hours callouts as Subject Matter Expert for EMS generation applications.
- Mentor, supervise and train Engineers, Technologists, Engineers-in-Training, Interns, and summer students.

Qualifications:

- Graduate in Electrical or Computer Engineering from a University of recognized standing and a minimum of eight years of related experience in power systems engineering.
- Member of Engineers Geoscientists Manitoba.
- Must have completed Standards of Conduct training or be willing to complete it within two weeks of the start date.
- Must obtain and maintain a current Personnel Risk Assessment and a "Clear" security rating in accordance with Manitoba Hydro policy G45D.
- Possess a valid Province of Manitoba driver's licence.
- Possess initiative and mature judgment with the ability of making and implementing sound decisions.
- Must have the capability to effectively coordinate projects and to adjust to frequently changing priorities.
- Present strong verbal and written communication skills. Must be able to effectively communicate complex ideas to all levels of audiences while being tactful and diplomatic to gain others' confidence.
- Display enthusiasm and a high degree of initiative in handling complex and adverse technical and administrative problems.
- Willing to represent the corporation on external committees and working groups.
- Demonstrate an ability to work in a high-functioning technical team environment.
- Demonstrated ability to effectively use computer programs intended for power system simulation.
- Knowledge of internal and external provincial transmission operations would be an asset.
- Knowledge of System Control Department processes and familiarity with positions and their duties/responsibilities would be an asset.
- Knowledge of programming languages would be an asset.
- Familiarity with the EMS, EMS revision process, and system applications.
- Demonstrated ability to develop computer models to analyze power systems.
- Master's degree or post-graduate courses related to power system would be an asset.

Salary Range
Starting salary will be commensurate with qualifications and experience. The range for the classification is $49.97-$68.46 Hourly, $95,747.86-$131,177.28 Annually.

Apply Now!

Visit www.hydro.mb.ca/careers to learn more about this position and to apply online.
The deadline for applications is **JULY 9, 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.
#IND1