



EMPLOYMENT OPPORTUNITY

Closing Date: 2026/09/28

AEMS Power System Applications Engineer **Winnipeg, MB**

Manitoba Hydro is consistently recognized as one of Manitoba's Top Employers! We are 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 champions safety, supports innovation, and delivers on our commitment to customer service - while actively fostering a diverse, equitable, and inclusive workplace reflective of the communities we serve.

Great Benefits

- Competitive salary and comprehensive benefits package.
- Defined-benefit pension plan for long-term financial security.
- Nine-day work cycle, typically resulting in every other Monday off to support a balanced approach to work, family life and community.

Position Overview:

We are seeking an AEMS Power System Applications Engineer to join our Control Centre Technology Systems Department in Winnipeg, Manitoba.

Responsibilities:

- Lead technical studies, specialized tests, written reports, modeling, and support towards implementation of new and/or enhancing existing advanced stability applications including the build-out of Wide Area Monitoring System (WAMS) applications, DSA Tools, and related advanced applications for System Operations.
- Perform and direct technical staff in the analysis of AEMS stability applications and NERC compliance requirements by facilitating the creation of performance monitoring, system tests and procedures for benchmarking.
- Investigate results to provide recommendations for software enhancements, system upgrades and technical guidance during system upgrade initiatives and activities.
- As the subject matter expert, lead, coordinate, and represent Manitoba Hydro efforts at the North American Synchrophasor Initiative (NASPI) working group, GE EMS User Group and the MISO WAMS User Group, toward technology implementation and WAMS roadmap development.
- Develop and coordinate compliance activities to ensure adherence to compliance programs and standards relating to the AEMS applications. This includes documentation, process development, monitoring controls, evidence collection, compliance oversight and self-certification requirements and, participating in audits for TOP-001 R13 and TOP-010.
- Foster relationships and collaborate with Manitoba Hydro's Reliability Coordinator (MISO), vendors, and external entities to drive common goals and purposes for the AEMS, and share knowledge to institute optimal power grid solutions.
- Responsible for the creation of WAMS and DSA Tools technical documentation and reside as the Document Authority for System Operations ensuring all revisions are implemented and NERC standards are upheld.
- Responsible for providing advanced technical details of solutions pertaining to WAMS and DSA Tools project development, real-time application implementation, and maintenance activities to assist with evaluation of fiscal responsibility, reliability, and practicality.
- Use specialized knowledge to create procedures for troubleshooting normal and emergency operating conditions within the AEMS applications to maintain NERC's Real-time Assessment requirement. Applications include DSA Tools (PSAT, VSAT, TSAT) and WAMS Applications (Linear State Estimator, oscillation monitoring and island detection), and others.
- Provide engineering and technical support services for System Control and System Performance Department application users.
- Represent System Operations on inter-utility study task forces and committees concerned with WAMS and DSA Tools application performance.
- Participate in an on-call rotation which provides support to users of WAMS and DSA Tools, including but not limited to System Control and System Performance departments.
- 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.
- Professional member in good standing with Engineers Geoscientists Manitoba (or willingness and ability to attain within a specified amount of time).
- 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 P513.
- 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
- Demonstrate an ability to work in a high-functioning technical team environment.
- Demonstrate an ability to effectively use computer programs such as PSS/E and DSA Tools to develop computer models and perform system studies to analyze the power systems.
- Familiarity with the AEMS engineering applications including DSA Tools systems and integration, WAMS applications, and stability assessment would be an asset.
- Knowledge of internal and external provincial transmission operations would be an asset.
- Knowledge of SCD processes and familiarity with SCD 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.
- 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 \$52.88-\$72.45 Hourly, \$101,332.40-\$138,828.30 Annually.

Apply Now!

Ready to join a team that energizes Manitoba and puts safety, innovation, and inclusion at the heart of everything we do? Visit www.hydro.mb.ca/careers to learn more about this position and to apply online.

Application deadline: SEPTEMBER 28, 2026.

We appreciate your interest in Manitoba Hydro and thank all applicants. Only those selected for the next stage of the selection process will be contacted.

If you require accommodations during the recruitment process or need this posting in an accessible format, please let us know - we're committed to a barrier-free experience for all candidates.