Manitoba Hydro
energy for life

EMPLOYMENT OPPORTUNITY

Closing Date: 2026/11/30

Grid Modernization Integration 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.
- Enjoy a work schedule that typically provides every second Monday off (subject to location and operational requirements), supporting a balanced approach to work, family life and community.

Position Overview:

We are seeking a permanent Grid Modernization Integration Engineer to join our System Performance Department in Winnipeg, Manitoba.

Responsibilities:

- Perform ASPEN, PSS/E, DSATools (VSAT, TSAT, SSAT, and PSAT), PSCAD, RSCAD/RTDS and other related studies for the integration of modern distribution systems including the IBRs into the transmission system.
- Develop appropriate skills to understand the rapidly evolving Modern Customer Solutions sphere and its impact on the existing transmission system.
- Perform protection and control coordination, and system restoration studies between the modern distribution systems including the IBRs and the transmission system.
- Prepare reports, commissioning procedures, operating procedures, and guidelines as well as liaise with other departments, divisions and outside agencies for safe and secure operation of the modern distribution systems and the IBRs.
- Conduct, and/or direct technical studies, computer modelling, simulation, and field tests related to Manitoba Hydro's protection and control settings, to ensure the reliable operation of the power system.
- Perform study model validation and relevant studies, real time system simulation and testing to ensure compliance with NERC and MRO protection and control testing guidelines and standard requirements.
- Initiate, plan, coordinate, conduct and/or direct system tests as required to help determine actual system behaviour and benchmark system models accordingly.
- Be an active contributor and provide technical support to protection and control commissioning teams during integration of modern distribution systems and IBRs.
- Prepare reports and technical memos recommending system improvements and control and protection modifications based on the analysis of system disturbances and provide SCC with appropriate operating procedures.

Qualifications:

- Graduate in Electrical Engineering from a university of recognized standing with a minimum of four years of related experience in power system studies, control circuits, protection and power system analysis.
- Strong background in power system engineering on transmission and distribution, including power flow, fault analysis, harmonic and dynamic stability studies.
- Knowledge of inverter-based resources and distributed generation requirements, including protection, interconnection, and ride through expectations.
- Familiarity with power system equipment, protection and control systems and their functions in the power system.
- Knowledge and demonstrated competency of power system simulation tools such as ASPEN, PSS/E, DSATools (VSAT, TSAT, SSAT, and PSAT), PSCAD and RTDS, and general technical knowledge of their application to Manitoba Hydro and surrounding power systems.

MANITOBA HYDRO IS COMMITTED TO DIVERSITY AND EMPLOYMENT EQUITY

- Understanding of NERC requirements and how stronger coupling between transmission and distribution affects operating limits and procedures.
- Proven experience in writing, testing, and maintaining operating procedures, switching procedures, and abnormal or emergency instructions.
- Ability to translate complex technical analysis into clear, step-by-step guidance that operators can safely apply in real time.
- Familiarity with control room environments and tools such as EMS, SCADA, ADMS, and OMS.
- Possess a willingness to learn, shows initiative and mature judgement with the ability to make and implement sound decisions with minimal supervision.
- Post graduate degree or graduate courses related to power systems would be an asset.
- Professional member in good standing with Engineers Geoscientists Manitoba (or willingness and ability to attain within a specified amount of time).
- Must 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 $48.74-$67.29 Hourly, $93,398.24-$128,947.78 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: NOVEMBER 30, 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.