

## Power System Study Engineer

The Engineering Service Business Unit focuses on power system software development, power system and substation consulting studies and compliance testing services for electric utilities and other clients in power industry. We are the vendor of the cutting-edge power system analysis software package, DSATools™, recognized globally as leading-edge software platforms for dynamic security assessment of complex power systems for both off-line (system planning) and on-line applications (near-real-time operation). Our team provides a full spectrum of study services from fast electromagnetic transient switching studies, power system planning and operation studies (including transient, small-signal, voltage, and frequency stabilities), post-mortem investigation of system disturbances and events, generation and load interconnection studies, generator including wind and solar renewables, and load model development or validation via field testing, and to NERC compliance studies (e.g., TPL, PRC, MOD, CIP, etc.).

In addition, our Real-Time Digital Simulator (RTDS)-equipped protection and control lab provides unlimited potential for testing and evaluation of new control, protection, and communication devices and schemes.

We have an exciting opportunity for up to two (2) Study Engineers to join a team of highly experienced power system study experts and specialists. The successful candidate is expected to perform various types of system studies and participate in software development as well.

- \* Prepare power flow, short-circuit, and dynamic simulation study cases including creation of study contingencies pursuant to study scope and requirements.
- \* Perform power flow, short-circuit, contingency analysis, stability (transient, small-signal, voltage, and frequency) studies and transfer studies.
- \* Perform power system planning and operational studies including NERC compliance TPL and PRC studies
- \* Develop user-defined models for special power system control and protection schemes and equipment for use in DSATools™ and other simulation platforms (PSSe/PSCAD).
- \* Conduct model validation studies for renewables resources (solar and wind, etc.) and conventional generating units based on field measurement data
- \* Performing control setting studies, and protection coordination studies.
- \* Preparing technical study reports including model validation reports per regulatory requirements.
- \* Present study results or reports to clients and act as a subject matter expert to deliver technical training courses
- \* Assist in proposal development in response to request for proposal (RFP) and/or developing work scope to meet clients' needs
- \* Participate in software development and testing of new software releases

### Qualifications

- \* A Masters or PhD in Electrical Engineering from a recognized university with a focus on Power Systems including Power systems analysis, Modeling techniques, and computational algorithms.
- \* Registered as Professional Engineer with Engineers and Geoscientists of BC (EGBC).
- \* For Senior level, at least 8 years of experience in Electrical Engineering with expertise in the areas of power system planning and operational studies; power system research; power system analysis software development and customer support.

Equivalent combination of education and experience may be considered.

*\* New graduates who are eligible to register as EITs and interested in power system analysis and simulation are encouraged to apply.*

**The following Skills/Abilities/Competencies are associated with success for this role:**

- \* Good knowledge of power system modeling and calculation methods, such as steady-state (power flow, contingency, and voltage stability), short-circuit, and transient and small-signal stability (time domain and frequency-domain) analyses.
- \* Strong understanding of generator and renewable modeling, power system and/or substation protections, and control systems of synchronous generators, renewables, FACTs, etc.
- \* General knowledge of power system operation, protection, grid voltage and frequency controls, and relevant reliability standards
- \* Proficient in power system simulation software (i.e., DSA Tools/PSSe/PSCAD/DigSILENT) is an asset
- \* Experienced with programming in one or more of programming languages: Python, MATLAB, and C/C++

**In addition, the following are desired competencies:**

- \* Strong verbal and written communication skills and the ability to effectively communicate with diverse audiences and stakeholders.
- \* Able to listen and encourage open dialogue with project team members.
- \* Uncompromising dedication to safety and quality.
- \* Ability to work independently and with a team and role model high standards of professionalism.

**Job Status: Full-Time Regular**

**Affiliation: M&P**

**Annual Salary: \$107,000 - \$125,000**

Note : candidates with higher or lesser qualifications and experience will be evaluated and hired at the appropriate specialist, senior, intermediate or junior Engineer

Please be advised that this role has been assessed as safety sensitive and pre-qualification alcohol and drug testing will be required as a pre-condition to employment.

As part of the selection process, applicants may be required to complete a written test/assessment and/or a presentation as part of the interview process.

ALL CANDIDATES ARE REQUIRED TO ATTACH A COPY OF THEIR COVER LETTER, RESUME, DIPLOMA/DEGREE, ACADEMIC TRANSCRIPTS & PROOF OF PROFESSIONAL DESIGNATION.

If applicable, a copy of your work visa is also required. INCOMPLETE OR LATE APPLICATIONS CANNOT BE PROCESSED. This will ensure we have all the necessary information to assess your application without any delays.