

Careers at the AESO

As an independent system operator, the AESO leads the safe, reliable and economic planning and operation of Alberta's interconnected power system. The AESO also facilitates Alberta's fair, efficient and openly competitive wholesale electricity market, which in 2010 had about 175 participants and approximately \$5 billion in annual energy transactions.

Power Systems Engineer

Position Summary

A Power Systems Engineer required to support our Grid & Market Operations group.

This individual is a key member of a core operations team and is responsible for the support and management of the Energy Management network applications. This includes the operation, database maintenance, and trouble-shooting of State Estimator (SE), Contingency Analysis (CA), Optimal Power Flow (OPF), Voltage Stability Analysis (VSA), and Transient Stability Analysis (TSA).

The successful candidate will have an excellent track record of integrating a wide variety of technologies in a fast paced environment and will have extensive working and institutional knowledge and understanding of complex control systems applications. The incumbent will have experience in large grid models, power flow and stability software and advanced network applications tools.

Accountabilities and Responsibilities

Responsibilities include:

- Proven ability to work in a team environment to successfully maintain and ensure the smooth operation of the EMS network applications.
- Proven analytical ability to trouble-shoot, assess test results, propose and evaluate the pros and cons of different options in problem-solving.
- Proven skills in verbal and written communications through presentations, reports, and constructive working relationship with various stakeholders.
- Perform power system analysis including power flow, contingency analysis, optimal power flow, voltage stability, and transient stability studies, and validation of the results.
- Mentoring and training capability: to system controllers and other team members on topics related to on-line power system analysis.
- Provide support to system controllers on real-time analysis and studies using network applications in EMS.
- Perform the modeling of power systems including HVDC and its control systems.
- Maintain databases for network applications including SE, CA, OPF, and VSA/TSA.
- Be able to understand network application programming code written by others.

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- Make recommendations of functional enhancement for EMS upgrade.
- Provide inputs and support to projects that may impact EMS network applications.
- Documenting the processes which include network database maintenance, best practices for operation, trouble shooting, etc.
- Provide 24/7 on-call support for Control Center Operations.

Education

- Post secondary degree in business, engineering or related field.
- Emphasis in Power Systems would be considered an asset.

Knowledge, Skills, Abilities and Experience Required

Must have's:

- Well developed verbal and written communication skills.
- Registered Professional Engineer with minimum of 5 years experience in power systems operations or planning.
- Experience in working in teams and proven skills in providing customer support and resolving urgent issues.
- Good knowledge on power system modeling and analysis methodologies.
- Working knowledge on EMS and understanding of real-time EMS databases. Experience with Alstom EMS is an asset.
- General knowledge and experience on the structure and operation of power market.
- Ability to work with little direct supervision.
- Self motivated, with desire to stay current on latest job-relevant systems technologies.
- Possess conflict resolution, change management abilities and innovative ways of doing things.
- Good experience using the Microsoft Office suite to produce documentation and communications.
- Comfortable working with both business users and technical specialists.
- Excellent written and verbal communication skills.
- Well organized, self starter with a planned and structured approach to project delivery.
- Power Systems/Energy/Wind/Utilities Industry experience.

If you are interested in the above position, please email your resume in confidence to careers@aeso.ca in order to be considered.

The AESO is unable to accept unsolicited agency resumes. Any resumes submitted become the sole property of the Alberta Electric System Operator.

The AESO would like to thank all applicants for their interest; however, only those candidates selected for interviews will be contacted.

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