

November 7, 2025

Senior Substation Layout Engineer

We are actively seeking an experienced **Senior Substation Layout Engineer** to become an integral part of our dynamic team. In this role, you will be responsible for the design and implementation of high-voltage substations, ensuring their reliability, safety, and efficiency for our industrial clients across Western Canada. If you have a passion for power systems, substation design, and leading multi-disciplinary teams, we encourage you to apply and be part of our exciting projects.

Xentric Engineering is a multi-disciplinary engineering consulting firm, specializing in utility interconnections, transmission lines, high-voltage electrical substations, and distribution systems for generating facilities, large industrial operations, and utilities.

JOB TITLE: Senior Substation Layout Engineer

JOB NUMBER: 202510-E4-001

LOCATION: Canmore, AB, Calgary, AB, or Langley, BC

OVERVIEW: As a Senior Substation Layout Engineer, you will lead the design and development of high-voltage substations, working closely with a multidisciplinary team. You'll oversee engineers and EITs, ensuring technical accuracy and compliance with Canadian standards. Client engagement is a key part of the role—you'll collaborate with stakeholders, utilities, and regulatory bodies to address technical inquiries and maintain alignment throughout the project lifecycle. This position requires strong leadership, technical expertise, and the ability to manage multiple priorities in a fast-paced environment.

The job position will include, but not be limited to, the following:

1. *Substation Design Leadership:*
 - Lead a multidisciplinary team of engineers and EITs in the design of high-voltage substations.
 - Coordinate with civil, structural, and protection teams to ensure integrated and optimized designs.
 - Develop conceptual and detailed designs for substation equipment and layouts.
2. *Power System Studies:*
 - Conduct power system studies, including load flow, short circuit, protection coordination, and arc flash.
 - Evaluate system performance and propose improvements.
3. *Equipment Specifications:*
 - Develop technical specifications for substation equipment (transformers, breakers, etc.).
 - Collaborate with procurement teams to ensure compliance with project requirements.
4. *Design Documentation:*
 - Create design drawings, schematics, and station layouts.
 - Prepare detailed engineering reports.
5. *Energization and Commissioning:*
 - Draft energization and commissioning plans.
 - Oversee on-site field inspections during construction and commissioning phases.



6. *Client Interaction:*

- Work closely with clients, stakeholders, and regulatory bodies.
- Provide technical expertise and address project-related queries.

CANDIDATE: The ideal candidate would have the following:

- Bachelor's degree in electrical engineering or a related field.
- Professional Engineer (P.Eng.) designation with APEGA and/or EGBC, or eligibility for registration.
- Minimum 5 years of experience in substation design and power system engineering.
- Strong knowledge of IEEE, CSA, and Canadian Electrical Code standards.
- Proficiency in AutoCAD, Revit, and power system analysis tools (e.g., ETAP, CYME).
- Excellent leadership and communication skills.
- Ability to manage multiple priorities in a fast-paced environment.
- Self-starter with strong analytical and problem-solving capabilities
- Demonstrates a strong commitment to mentoring new graduates and helping them grow toward a high standard of excellence

The successful candidate will be supplied with a computer workstation, complete with the appropriate software and applications necessary to do the job. The standard work week would be 40 hours, with the hours of work flexible and based on an 8-hour day. This role is primarily an in-office position, however working from home occasionally is permitted.

REQUIREMENTS: This position requires that the successful candidate is legally permitted to work in Canada and is eligible for registration as a Professional Engineer (P. Eng) with either APEGA or EGBC.

ABOUT US: Xentric is a privately owned, engineering firm with nearly 100 years of industry experience. We are 100% Canadian owned and operated, delivering high-quality engineering and consulting services across Western Canada. Led by a collaborative and experienced management team, our reputation is built on technical excellence, proactive communication, and long-term client relationships.

Our mission is to provide outstanding engineering services with uncompromising quality and customer support. We strive to exceed expectations through a solutions-focused approach, anticipating client needs and ensuring successful project outcomes. Our employees contribute to complex, impactful projects in a supportive environment, with access to a comprehensive benefits package and long-term career development. Our main office is in Canmore, AB, with additional offices in Langley, BC, and satellite staff in Kelowna and Calgary; a dedicated Calgary office is being planned for 2026.

APPLYING: To apply, please submit a cover letter (required), resume, and a writing sample (optional but preferred – e.g. a technical memo, report excerpt or coursework) to careers@xentric.ca, referencing the job number in the subject line. We appreciate the interest of all applicants. Only candidates selected for an interview will be contacted.



BENEFITS:

- Casual dress
- Company events
- HSA
- Active Living Benefit (Fitness)\$1,000
- Flexible schedule and work environment
- On-site parking
- Paid time off
- GRSP
- Schedule: Monday to Friday

ABILITY TO COMMUTE/RELOCATE:

We're hiring across all our locations! Our Canmore and Langley offices are each about an hour from Calgary and Vancouver, respectively. Please consider your ability to commute or plans to relocate before applying.

