

Source: **BC Hydro**
Job Title: **Transmission Engineers (Lines/Stations/P&C, Transmission Estimating, Project Engineering)**
Job Location: **Burnaby, British Columbia, Canada,**
Annual Salary: **Specialist Engineer \$127,900 - \$161,800; Senior Engineer \$107,010 - \$135,330.**

The North Coast Transmission Projects will help shape the future of British Columbia's north coast. By delivering clean, reliable power to northern B.C., it will unleash major economic opportunities, support growth in key industries, and attract billions in private investment in our economy. It will enable development in mining, critical minerals, LNG, manufacturing, and technology – sectors essential to diversifying B.C.'s economy and reducing greenhouse gas emissions. Recognized by provincial and national leaders as critical infrastructure for Canada's future, the project is being advanced in partnership with First Nations and the Province of B.C.. Joining our engineering teams to work on projects like North Coast Transmission means contributing to transformative initiatives and projects that will power B.C.'s next wave of industrial development and strengthen communities across the province and country.

To deliver this work, we are looking for experienced engineers at Senior and Specialist levels who are ready to take their expertise to a new level.

In return, you get rare stability and a real sense of purpose: a guaranteed lifetime defined-benefit pension, flexible and comprehensive benefits with dedicated mental-health coverage, strong work-life balance, and long-term job security. You'll have opportunities to keep learning, spend time in the field and on site, and build a career where your work genuinely matters.

You'll also be part of an inclusive community that values ownership and belonging, paired with the lifestyle advantages of the Vancouver region—mild winters, mountains, water, lakes, and rivers all close to home.

* In your cover letter, please let us know which discipline or role you're applying for.

* If you're a person with a disability, please let us know by emailing RecruitmentHelp@bchydro.com

JOB DESCRIPTION

Duties:

****What you Bring****

- Bachelor's degree in Electrical Engineering, Civil Engineering, Mechanical Engineering, Computer Engineering/Science, or a closely related discipline from recognized post-secondary institutions. Advanced academic qualifications are considered an asset.
- Registration, or demonstrated progress toward registration, as a Professional Engineer (P.Eng.) or EIT with Engineers and Geoscientists BC (EGBC). Equivalent professional registration with other Canadian or international jurisdictions will also be considered.
- Relevant engineering experience in electric power utility environment. Typically, 8+ years for Senior Engineer roles and 12 + years for Specialist Engineer roles. Candidates with lesser qualifications may be considered for junior roles, subject to vacancies.

What you'll do

****Transmission Lines Design – Overhead (Electrical, Civil /Structural, Mechanical)****

- Provide enterprise-level technical leadership for the design and governance of 69 kV to 500 kV overhead transmission lines across BC Hydro's capital, interconnection, electrification, maintenance, and emergency response programs.
- Lead high-complexity, high-risk projects from route selection and line layout through structure configuration and conductor selection, hardware and insulator specification and selection with strong proficiency in PLS-CADD and production of constructible Plan & Profile drawings.
- Act as Professional of Record (POR) and Owner's Engineer (OE), setting design strategies, review plans, resource requirements, and technical risk mitigation approaches; may serve as Project Engineer on major programs with systemwide integration impacts.
- Provide authoritative technical oversight through manufacturing, construction, commissioning, and site issue resolution, ensuring high-quality, safe, and reliable delivery.

****Transmission Lines Design (Geotechnical)****

- Provide technical leadership and judgment to deliver safe, constructible geotechnical designs for complex capital and maintenance projects across transmission infrastructure.
- Lead and review geotechnical analysis related to soil, groundwater, rock, and landslide behavior, including slope stability, settlement, liquefaction, seismic hazard assessment, and development of ground improvement solutions aligned with project performance and withstand requirements.
- Deliver and govern geotechnical design for foundations, underground works, shoring systems, and natural hazard mitigation, including flood and landslide risk identification, quantification, and mitigation design.
- Act as Professional of Record (POR), planning and overseeing field investigations, in-situ testing, laboratory programs, and interpretation of data from site investigations, instrumentation, LiDAR, GIS, satellite imagery, and published sources.
- Ensure compliance with CFEM, NBC, and BC Hydro standards, while delivering Owner's Engineer oversight, independent checking, and review.

****Transmission Lines Design (Civil)****

- Provide civil engineering leadership for the design and construction of foundations supporting high-voltage transmission lines and telecommunication antenna structures, utilizing independent judgment to solve high-complexity, high-risk problems and ensure safe, cost-effective, and constructible solutions that meet BC Hydro standards.
- Manage large multidisciplinary design work packages, oversee technical specifications and cost inputs, and implement BC Hydro Project and Portfolio Management practices, including safety procedures and field reviews.
- Act as Professional of Record (POR), Independent Checker, and Owner's Engineer to ensure compliance with regulations and contractual requirements, while maintaining comprehensive project documentation.
- Foster strong collaborative relationships both internally and externally, provide technical guidance and mentorship, and proactively address impacts and issues across teams.
- Possess strong technical knowledge in geotechnical engineering aspect of foundation design, foundation design such as grillage, rock foundation, direct embedment, caisson, guy and helical piles as well as of applicable Canadian codes and standards, including CSA S16, CSA A23.3, CSA O86, and Canadian Foundation Engineering Manual.

****Transmission Lines Design (Structural)****

- Provide structural design leadership for high-voltage transmission line structures and telecommunication antenna supporting structures within a multidisciplinary environment.
- Apply independent judgment to analyze and resolve complex structural problems, delivering safe, cost-effective, constructible designs that meet BC Hydro standards and support large design work packages across multiple stakeholders.
- Perform advanced structural modelling and analysis, and prepare technical specifications, cost inputs, and RFP documentation while implementing BC Hydro design and safety practices.
- Provide construction-phase support through field reviews and resolution of site issues, and maintain comprehensive design and project records to support safe delivery and lifecycle management.
- Bring strong technical knowledge in the structural design of steel, wood, and fibre-reinforced polymer (FRP) transmission line supporting structures, and steel telecommunication antenna supporting structures.
- Use PLS-Tower and PLS-Pole for modelling and analysis of tower/pole structures; familiarity with PLS-CADD is desirable.

Transmission Lines Design (Electrical)

- Provide technical leadership in the electrical design of high-voltage transmission lines (60 kV to 500 kV), with a strong focus on advanced studies and safety-critical engineering.
- Perform and govern complex electrical studies including grounding system design, step and touch potential analysis, AC interference with pipelines and railways, lightning protection, electrical safety assessments, and EMF evaluations.
- Utilize advanced engineering techniques, computer applications (e.g., CDEGS, WinIGS, EMPTP-RV), and innovative approaches to solve complex cable engineering challenges.
- In-depth knowledge of AC interference analysis and applicable standards and computer applications. Strong familiarity with national and international standards, such as IEEE 80/81, CSA C22.3.
- Provide technical and site support through installation, commissioning, maintenance, and resolution of field issues to ensure safe, constructible outcomes.

Transmission Lines Design - Underground Cables (Electrical)

- Provide technical leadership in the design, installation, operation, and maintenance of underground transmission cable systems, including hydraulic systems and assessment of thermo-mechanical behavior.
- Utilize advanced engineering techniques, computer applications (e.g., ETAP, CDEGS, Cymedist, Comsol, Python), and innovative approaches to solve complex cable engineering challenges.
- Manage medium to large projects, develop specifications and standards, prepare estimates, and deliver technical and site support throughout installation, commissioning, and maintenance phases.
- Review work to ensure accuracy and compliance, manage client and stakeholder relationships to add value and drive consensus, and may serve as Owner's Engineer Lead to coordinate internal review of third-party engineering work.

Substations Design (Electrical)

- Serve as a technical authority in the electrical and physical design of 12 kV to 500 kV transmission substations, covering AIS/GIS and greenfield/brownfield projects.

- Lead multiple technical areas for Electrical Design, such as standards, advanced design practices, grounding and lightning, regulatory compliance, and adoption of new technologies and technical solutions.
- Apply deep substation design expertise across layout, analytical studies, lighting, power cables, and station service power supply, with working knowledge of major equipment including transformers, capacitors, reactors, disconnect switches, circuit breakers, FACTS, and energy storage.
- Bring a strong understanding of power system planning, system operations, protection & control, and project management, and ensure alignment with BC Hydro standards plus key CSA/ULC/CEC and IEEE/IEC standards.
- Use design tools and CAD effectively (grounding/lightning/bus design tools as an asset), including 3D modelling with AutoCAD, Inventor, and Vault.

Substations Design (Civil/Structural)

- Provide deep technical expertise in the civil, structural, and seismic design and construction of electric utility substations from 12 kV to 500 kV.
- Carry out structural design, analysis and detailing for concrete, steel, masonry and timber structures associated with substation control and feeder buildings, electrical equipment supports and foundations, underground concrete manholes/ vaults and cable duct banks, seismic analysis and design of substation structures.
- Conduct civil design, analysis and detailing for substation site development including activities such as: site preparation.
- station access road alignment and profiles, site drainage, culverts, and ditches, oil spill catchment and containment systems.
- Lead a technical area for the Division, such as seismic design requirements, engineering standards development, estimating practices, and use of advanced design tools.
- Use industry-standard structural analysis tools (e.g., SAP2000, S-Frame) and perform manual calculations to validate designs; experience with Inventor, Revit, Civil3D, and other 3D design tools is an asset.

Substations Equipment (Electrical)

- Provide deep technical expertise in transmission substation equipment for 12 kV to 500 kV applications, including defining requirements, conceptual designs, and performance criteria for equipment and systems.
- Lead a technical area for Equipment Engineering (e.g., standards, procurement strategies, regulatory compliance, and implementation of new technologies and technical solutions).
- Manage medium to high-complexity projects and work packages by planning resources, developing scopes, writing specifications and standards, preparing cost estimates, and providing technical and site support through installation and commissioning.
- Develop and execute procurement approaches by supporting strategic sourcing, vendor evaluation, negotiation, design review, factory acceptance, and equipment acceptance.
- Apply broad working knowledge across electrical, mechanical, civil, and protection & control disciplines to ensure equipment solutions meet operating requirements and integrate effectively into the overall system.

Substations Mechanical (Mechanical)

- Lead multiple technical areas for BC Hydro Substation and Telecom mechanical systems including: Diesel generators for standby and prime power sites - Heating, Ventilation and Air Conditioning (HVAC) systems for Telecom buildings – Fire suppression systems.

- Provide technical and site support during factory testing, construction, installation and commissioning of mechanical systems at substation and telecom sites.
- Analyze and resolve a variety of challenging and unusual engineering problems with considerable independence
- Ability to use a variety of CAD tools including 2D and 3D modelling with AutoCAD, Inventor, Revit and Vault.
- Strong understanding of applicable industry codes and standards such as BC Building Code, BC Fire Code, NFPA standards, etc.

****Protection & Control (Electrical)****

- Engineer and deliver critical Protection and Control systems supporting BC Hydro's transmission, distribution, and generation networks (12kV to 500kV), across both greenfield developments and brownfield upgrades.
- Contribute to high-profile, technically complex capital projects with significant scale, risk, and organizational visibility.
- Collaborate across Planning, Project Engineering, Construction, Commissioning, Operations, and Control Centres to deliver fully integrated, end-to-end solutions.
- Define and apply protection architectures, functional requirements, and technical standards to ensure safe, resilient, and compliant power system operation.
- Design and drive advanced control architectures leveraging IEC61850 and DNP3 to power safe, resilient, and intelligent grid operations.
- Perform system studies, fault analysis, and risk assessments to validate performance, reliability, and operational readiness.
- Utilize BIM and digital design tools to improve design quality, accuracy, constructability, and delivery efficiency.
- Lead or support engineering design, specifications, construction documentation, and formal technical reviews.
- Provide hands-on technical leadership through design, construction, testing, commissioning, and system energization, acting as a technical authority and problem solver in both office and field environments.
- Operate in a dynamic role that balances deep technical expertise, leadership, and real-world system impact.

****Quality Assurance (Electrical)****

- Assess quality risks and develop surveillance strategies to support procurement for electrical power system equipment including fuses, cutouts, cables and accessories, substation panels, switchgear, capacitors, reactors and power transformers (primarily 12kV to 500 kV).
- Develop quality assurance plans, provide oversight, and ensure execution of quality surveillance activities to support capital project delivery and ongoing maintenance and operation of the BC Hydro power system.
- Perform audits of supplier facilities to assess quality management systems, practices, processes.
- Review manufacturer tests plans, witness factory testing, and perform inspections to assess conformance to technical specifications, standards (CSA, IEEE, IEC, etc.), and contractual requirements.
- Manage non-conformance of technical and contractual requirements to ensure appropriate identification, tracking, and resolution.

****Transmission Estimating (Electrical, Civil, Mechanical, others)****

- Prepare project cost estimates for projects on transmission lines, substations, switching stations, and the protection, controls and telecommunication systems associated with such assets.
- Review project cost estimates prepared by external consultants.

- Provide cost estimating support to projects in various stages of the project life cycle, including during pre-project planning and for procurement and contract management activities during implementation.

****Transmission Project Engineering (Electrical, Civil, Mechanical, others)****

- Manage the engineering component (scope, schedule, and cost) of large, complex transmission and substation projects, identifying and mitigating technical risks and system integration issues.
- Act as the lead Owner's Engineer to coordinate and lead the internal review and acceptance of engineering work by third parties.
- Establish design strategies, review plans, and resource requirements, working with functional managers to assemble and guide engineering teams through the project lifecycle
- Coordinate the development of technical specifications and drawings, and ensure technical support is provided during manufacturing, construction, and commissioning phases for timely issue resolution.
- Provide leadership by coaching project team members to resolve complex issues and presenting technical recommendations to senior management and executives.

Qualifications:

****General qualifications and responsibilities****

- Engage in project coordination, engineering design, contract and construction management, maintenance support, and emergency response activities across the full project lifecycle.
- Act as Professional of Record (POR) or Owner's Engineer (OE) on assigned work, with accountability for technical quality, safety, and compliance, including review and acceptance of consultant and contractor deliverables.
- Set technical direction and deliverables, including Design Basis and Design Reports, Hazard Logs, specifications, estimates, drawings, and field review plans, ensuring alignment with BC Hydro standards and accepted engineering practice.
- Independently manage medium-to-large projects and work packages, establishing scope, priorities, technical approach, and resource plans within multidisciplinary teams.
- Apply strong leadership, analytical thinking, and independent engineering judgment to investigate, analyze, and resolve complex engineering problems, delivering safe, resilient, and constructible solutions.
- Conduct discipline-specific engineering studies, participate in site visits and field work, and coordinate closely with internal teams, consultants, contractors, and other stakeholders on complex, multi-stage projects.
- Provide technical leadership, independent checking, and review, serving as a senior technical authority and contributing to standards, best practices, and continuous improvement.
- Work collaboratively with clients and stakeholders to understand needs, drive innovation, add value through engineering solutions, and build alignment.
- Mentor and support team members, strengthening technical capability while fostering a safety-conscious, inclusive, and high-performing work environment.
- Demonstrate strong organizational skills, the ability to manage competing priorities, and a commitment to continuous learning and professional growth.
- Hold a valid Class 5 Driver's License in good standing, with the ability to travel for site visits and field assignments as required.
- see "Position Highlights" section for additional qualifications.

ADDITIONAL INFORMATION

- A comprehensive benefits package in one of Canada's Top 100 Employers and a Canada's Best Diversity Employer. See also bchydro.com/benefits.
- 15 paid vacation days to start (growing to 30 over time), the option to purchase up to 20 additional days annually using your 8% benefit credit, plus 13 paid statutory holidays each year.
- A secure future with a guaranteed lifetime defined-benefit pension, indexed for cost-of-living, a retiree benefits package after 10 years of service, and the option to supplement your savings through a Group RRSP.
- Work, life, and wellness support, generous maternity and parental/adoption leave with EI top-ups to 85% of earnings, access to health and wellness programs, and optional self-funded sabbatical or unpaid leave options to support different life stages.
- Flexible work model, role-based flexibility ranging from field-based and office-resident roles to hybrid and remote options, with hybrid and remote employees always welcome to work full-time from the office if they prefer.
- The salary range for each successful candidate will depend on the level the individual is assessed at. Salary would be determined based on years of experience, quality of experience, education and internal equity. Specialist Engineer \$127,900 - \$161,800; Senior Engineer \$107,010 - \$135,330.

For more information on the benefits we offer, visit bchydro.com/benefits.

What else you should know

- Applicants will be assessed based on: educational qualifications, standing with EGBC, experience (years, relevancy and quality), as well as their core competencies.
- Internationally trained engineers may be considered if eligible for EGBC registration.
- LMIA (Labour Market Impact Assessment) may be considered for applicants who are eligible for either their P.Eng or EIT registration with EGBC.
- Roles based at BC Hydro's Edmonds campus in Burnaby, BC in a 'hybrid' role, requiring in office work 2 to 3 days/ week.

Note: While the closing date is listed as the 30th of each month, this posting will remain open. Shortlisted candidates may be contacted earlier than this date.

- 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.

Location: Burnaby, British Columbia, Canada V3N 4X8

Don't forget to update your Candidate Profile with your current resume and copies of your certifications. If applicable, include your Trades Qualification. This will ensure we have all the necessary information to assess your application without any delays.

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How to Apply

Interested candidates should submit their applications online at https://app.bchydro.com/careers/current_opp.html by **2026-03-30**.

[Click here](#) to access the job posting or visit the [BC Hydro "Current Opportunities" Careers page](#) to view and apply for jobs.

You must use a supported browser, such as Firefox, Internet Explorer, Google Chrome or Safari. Your pop up blocker will also need to be disabled for the BC Hydro Careers site.

On the BC Hydro Careers site, click on the Apply button in order to complete the steps to apply for this job. Please be sure to update your Candidate Profile with your current resume and include copies of your certifications, if applicable.

We're always looking for exceptional people to bring new ideas, fresh thinking and the motivation to help shape the electricity system in B.C. It's an exciting time to be a part of our team as we invest in our system and prepare to meet the challenges of tomorrow.

Our values guide our work. Want to join us?

We are safe.

We are here for our customers.

We are one team.

We include everyone.

We act with integrity and respect.

We are forward thinking.

BC Hydro is an equal opportunity employer.

We include everyone. We welcome applications from anyone, including members of visible minorities, women, Indigenous peoples, persons with disabilities, persons of minority sexual orientations and gender identities, and others with the skills and knowledge to productively engage with diverse communities.

We are also happy to provide reasonable accommodations throughout the selection process and while working at BC Hydro. If you require support applying online because you are a person with a disability, please contact us at Recruitmenthelp@BCHydro.com

Flexible work model role definitions

Our four role types identify the degree of flexibility an employee could have to work from home based on the type of work they do. The flexibility for an individual job is up to the manager for each position and the operational requirements. Employees also have the right to work full-time from the office if they prefer. All of our roles require at least some in-person time.

IBEW/Field – No option to work from home

Resident – Works primarily (4+ days per week) in the office.

Hybrid – May be able to work from home up to 3 days per week.

Remote – Works from home 4+ days per week