

Electrical Engineer

Power grids, electronics and telecom. Where the electricity comes from and where the signals go.

TYPICAL PAY

\$105,000

a year, full time

PAY RANGE

\$70k to \$165k

starting to experienced

TIME TO QUALIFY

4 to 8 years

after high school

DEMAND

Good

job outlook

LICENCE NEEDED

Yes

regulated job

WHERE YOU WORK

**Utilities, electronics companies,
telecom, consulting firms**

How you get there

- 1 High school** Grades 11 and 12
Advanced Functions, Calculus, Physics and Chemistry are required. Marks in the high 80s or above at most schools.
- 2 Accredited electrical engineering degree** 4 to 5 years with co-op
A four-year Bachelor of Engineering or Applied Science at a school accredited by the Canadian Engineering Accreditation Board. You choose a stream in later years: power, electronics, communications or control.
- 3 Engineer-in-training** About 4 years
Register with your provincial regulator and work under a licensed engineer. Log your experience.
- 4 Professional practice exam** During your EIT (engineer-in-training) years
A law and ethics exam, taken during your training years.
- 5 P.Eng (professional engineer) licence** After 4 years
Apply with your experience record and references. Now you can seal drawings and take legal responsibility for designs.

Pros and cons

- + Utilities offer rare job security plus a pension
- + Electrification and grid upgrades mean decades of work
- + You can switch between power, electronics and software
- The hardest math of any engineering discipline
- Four more years to full licence after graduation
- Electronics manufacturing jobs are fewer in Canada than in the US

Optional boosts

Power systems and protection. Nuclear. Project Management Professional (PMP). A master's degree.

Good to know

Engineer is not electrician

Electricians install and repair wiring through a paid apprenticeship. Electrical engineers design the systems and rarely touch a wire at work. Different jobs, different training, and neither can legally do the...

Hydro-Québec changed the world's grids

In 1965 Hydro-Québec switched on the world's first 735 kilovolt transmission line to carry power from dams hundreds of kilometres north of Montreal. Utilities everywhere copied the idea.

Where these numbers come from

Job Bank: Electrical and electronics engineers, wages (updated Nov 2025)

Engineers Canada: Overview of the licensing process

Professional Engineers Ontario: fee schedule (PDF, Nov 2022)

Engineers and Geoscientists BC: fees (2026)

Numbers checked September 2026. Pay figures are typical full-time annual amounts in Canadian dollars, based on Government of Canada Job Bank wage data and published salary grids. They vary by province, employer and experience. Tuition is for domestic students. Sources, links and the click-through version: <https://career.help/ca/careers/electrical-engineer>



Scan for the full clicker