

Electricians

A guide for newcomers to British Columbia



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1. Working as an Electrician

Job Description

Electricians install, repair, and maintain electrical systems in all types of buildings and structures.

There are three main categories of electricians:

- **Construction Electricians** [NOC 7241]: you work for electrical contractors or building maintenance departments
- **Industrial Electricians** [NOC 7242]: you work for electrical contractors and maintenance departments of factories, plants, mines, shipyards and other industrial establishments
- **Power System Electricians** [NOC 7243]: you work for electric power generation, transmission, and distribution companies

Your duties vary according to the type and place of your work. In general, as an electrician you have the following duties:

- Read and interpret drawings, blueprints, and electrical code specifications to determine electrical wiring layouts
- Install or repair various electrical systems and parts
- Maintain and test electrical components and systems
- Ensure compatibility and safety of electrical systems
- Conduct preventive maintenance programs and keep maintenance records.

Source: WorkBC Career Profile <https://www.workbc.ca/Jobs-Careers/Explore-Careers.aspx>
[search 7241; 7242; 7243]

Industry Overview

There is a demand for skilled electricians in BC. Government statistics estimate there will be 5,300 job openings for construction and industrial electricians between 2017 and 2027. Much of this demand is due to the retirement of the baby-boomer generation.

A rapid increase in industrial activity in BC has helped to create many new jobs for industrial electricians. Large construction and transportation projects in the Lower Mainland region will continue to be a source of job growth.

Demand for construction engineers depends largely on the growth in the construction industry. Over the next few years, the pace of residential construction is expected to slow, while industrial construction is expected to remain strong. You may find more stable employment working as a maintenance electrician than in construction. Employment in the construction industry is often project-based, so you may experience gaps in employment between projects.

You will also be in higher demand if you specialize in new technologies. Work performed by electricians is expanding to include:

- alternative energy supplies, such as solar power, wind power and fuel cells
- wiring for smart homes
- automated systems for high-tech industries and complex computer offices
- automated systems in mills, mines, oil and gas operations and other plants

There is an increased demand for electricians who can install and maintain these new systems.

Sources:

- A Career as an Electrician: Becoming an Electrician in BC
<http://www.ejtc.org/electrician-apprenticeships/become-an-electrician.aspx>
- WorkBC Career Profiles

Job Outlook in BC

Electricians (except industrial and power system) NOC 7241

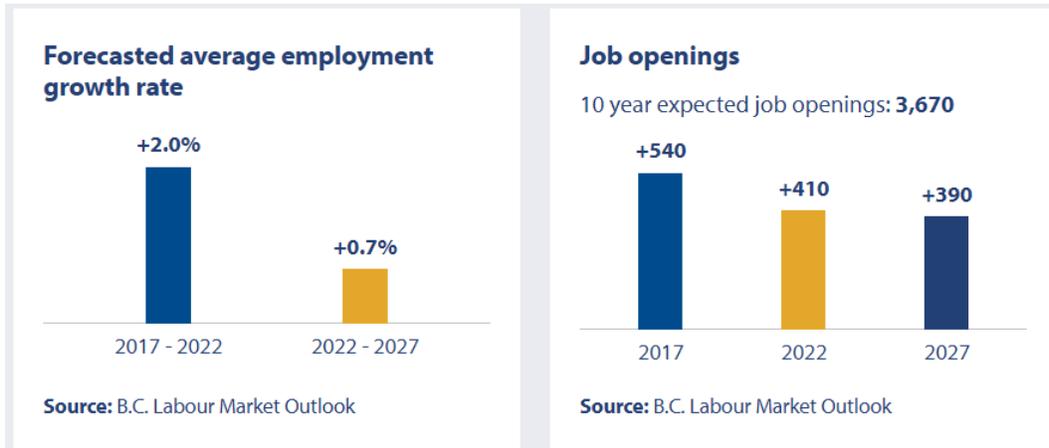


Chart from WorkBC

Industrial Electricians NOC 7242

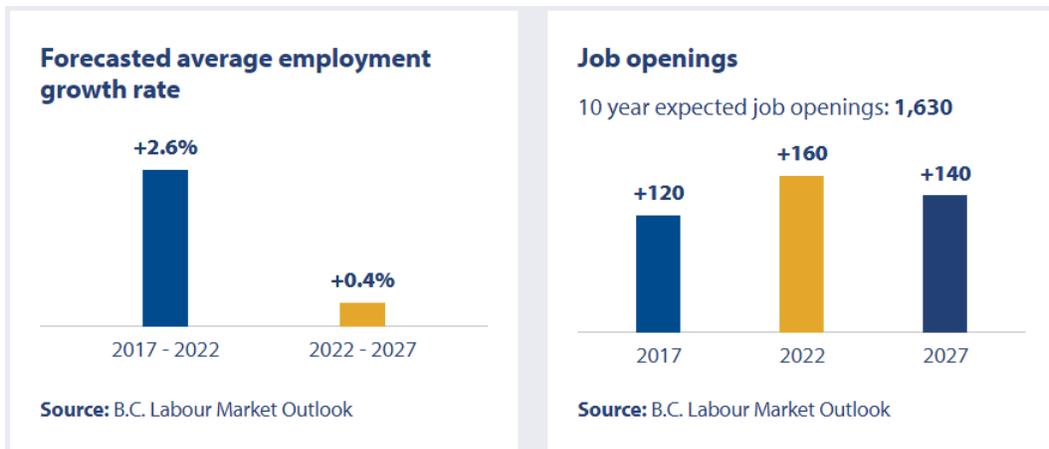


Chart from WorkBC

WorkBC provides job openings in BC regions from 2017-2027:

Region	Employment in 2017	Average Annual Employment Growth	Expected Number of Job Openings
Vancouver Island <ul style="list-style-type: none"> ▪ Electricians (except industrial & power systems) ▪ Industrial electricians 	2,360 650	0.0% 0.4%	530 270
Lower Mainland / Southwest <ul style="list-style-type: none"> ▪ Electricians (except industrial & power systems) ▪ Industrial electricians 	8,340 2,040	0.4% 0.4%	2,240 720
Thompson-Okanagan <ul style="list-style-type: none"> ▪ Electricians (except industrial & power systems) ▪ Industrial electricians 	1,690 640	0.2% 0.3%	400 200
Kootenay <ul style="list-style-type: none"> ▪ Electricians (except industrial & power systems) ▪ Industrial electricians 	500 470	0.4% 0.3%	140 150
Cariboo <ul style="list-style-type: none"> ▪ Electricians (except industrial & power systems) ▪ Industrial electricians 	800 480	-1.4% 0.3%	80 150
North Coast & Nechako <ul style="list-style-type: none"> ▪ Electricians (except industrial & power systems) ▪ Industrial electricians 	160 110	0.8% -2.4%	50 10
Northeast <ul style="list-style-type: none"> ▪ Electricians (except industrial & power systems) ▪ Industrial electricians 	470 250	1.7% 1.1%	230 130

You can learn more about working as an electrician in BC from:

- **WorkBC, Career Profiles** at <https://www.workbc.ca/Jobs-Careers/Explore-Careers.aspx>
 - Electricians or NOC 7241
 - Industrial Electricians or NOC 7242
 - Power System Electricians or NOC 7243
- **Careers in Construction: Electrician**
<http://www.careersinconstruction.ca/en/career/electrician>

Types of Employers

Electricians work in many settings including:

Construction Electricians

- employed by electrical contractors or construction companies
- maintenance departments of commercial buildings and other establishments
- may be self-employed

Industrial Electricians

- heavy industry
- maintenance departments of factories, mines, mills, oil and gas plants, shipyards, and other industrial establishments

Power System Electricians

- employed by electric power generation and transmission companies
- *This is a very specialized occupation with very few employers in the province. BC Hydro is the main employer.*

Salary

The median annual salary in BC for *Construction Electricians* (NOC 7241) is \$56,311. Electricians who have their own business may earn more.

The median annual salary for *Industrial Electricians* (NOC 7242) and *Power Systems Electricians* (NOC 7243) is \$72,996.

If you are training as an apprentice, you generally earn a percentage of a fully trained electrician's salary. You receive increases in pay as you complete each year of your apprenticeship.

If you are employed full-time, you may also receive benefits such as paid sick days, and dental coverage.

Job Bank Canada provides average salaries in BC:

Construction Electricians NOC 7241

Community/Area	Wages (\$/hour)		
	Low	Median	High
British Columbia	15.00	26.00	41.00
Cariboo Region	15.00	26.00	41.00
Kootenay Region	17.61	32.00	44.79
Lower Mainland - Southwest Region	14.75	22.50	38.46
Nechako Region	15.00	26.00	41.00
North Coast Region	20.00	28.70	41.50
Northeast Region	15.00	26.00	41.00
Thompson--Okanagan Region	15.60	28.00	44.19
Vancouver Island and Coast Region	16.00	30.00	44.00

Source: Job Bank, Wage Report http://www.jobbank.gc.ca/wage-outlook_search-eng.do?reportOption=wage [search 7241]

Industrial Electricians, NOC 7242

Community/Area	Wages (\$/hour)		
	Low	Median	High
British Columbia	21.00	35.00	44.00
Cariboo Region	21.00	35.00	44.00
Lower Mainland - Southwest Region	21.00	35.00	44.00
Nechako Region	21.00	35.00	44.00
Thompson--Okanagan Region	21.00	35.00	44.00
Vancouver Island and Coast Region	21.00	35.00	44.00

Source: Job Bank, Wage Report http://www.jobbank.gc.ca/wage-outlook_search-eng.do?reportOption=wage [search 7242]

Sources:

- Career Cruising <http://www.vpl.ca/digital-library/career-cruising/> [profile for Electrician]
Available from the VPL Digital Library | Explore our Digital Library page
- Work BC Career Profiles

Working Hours

Electricians typically work 40 hours per week, with possible overtime.

Shift work is common for industrial and maintenance electricians, and you may have to work evenings and weekends.

2. Skills, Education and Experience

Skills

- Detail oriented
- Good hand-eye coordination
- Reading skills
- Math skills
- Ability to interpret drawings
- Spatial perception
- Problem solving ability
- Good physical movement and the ability to work in a variety of places

Education and Experience

To work as an electrician in BC you require:

- completion of secondary school or equivalent course work
 - a certificate of qualification from the Industry Training Authority
- OR*
- registration in an apprenticeship program leading to qualification

Certified electricians are required to write the Red Seal Interprovincial Exam. Those who pass this exam are awarded the *Red Seal*, which means you can work as an electrician in the other provinces or territories without having to re-certify.

Qualifications

This occupation is regulated in British Columbia.

To work as an electrician in BC you must hold an industry training credential recognized by the *Industry Training Authority BC (ITA BC)*. If you don't hold a recognized training credential you may perform electrical work only if you are under

direct supervision of someone who is fully qualified and you are registered as an electrical apprentice through ITA.

The electrician apprenticeship requires a combination of work experience and in-school instruction that:

- typically takes four years to complete
- is available through secondary schools, colleges and technical institutes or by direct entry to the workplace

If you have significant work experience as an electrician but have never been certified in Canada, you may apply to challenge the certification. (To challenge you require 9,000 hours of directly related work experience).

If ITA approves your challenge application, you must then complete requirements which include successfully writing the Interprovincial Red Seal exam. In this case the completion of an apprenticeship program is not required.

For more information on the certification process, see:

- **BC Industry Training Authority (ITA):**
 - **Industrial Electrician** <http://www.itabc.ca/program/electrician-industrial>
 - **Construction Electrician** <http://www.itabc.ca/program/electrician-construction>
- **Electrical Joint Training Committee**
<http://www.ejtc.org/electrician-apprenticeships/become-an-electrician.aspx>

Internationally Trained Electricians

If you have previous experience and/or training as an electrician, you may be able to become certified in a shorter period of time by challenging the certification.

Being approved to challenge means that if you meet the criteria for your trade you will not be required to go through the full program. Instead, you will be allowed to become certified by writing and passing the final exam.

For more information see:

- **Challenging Exams - ITA BC**

<http://www.itabc.ca/apply-apprenticeship/challenging-exams>

The BC Industry Training Authority (ITA) provides assistance through the *Immigrants in Trades Training Initiative*. The program can help you with tuition funding, English classes, career counselling and more.

For information see:

- **Immigrants in Trades Training**

<http://www.itabc.ca/immigrants-trades/trades-training>

3. Finding Jobs

You'll find job advertisements in local newspapers, trade journals, and electronic sources, as well as through professional associations' publications.

Local Newspapers

You can look at the *Vancouver Sun & The Province* at Vancouver Public Library for free. Check the job postings daily, the careers section in the *Vancouver Sun* on Wednesdays and Saturdays and in *The Province* on Sundays.

Job White Pages

- Available in print at the Central Library or online at <http://www.vpl.ca/digital-library/jobfreewaycom>

NOTE: *You can only access this database from the Central Library or VPL branch libraries. Access is NOT available from home or outside the Library.*

Online Job Postings

- **Indeed.com**
http://ca.indeed.com/advanced_search
Find jobs posted on a large number of company career sites and job boards
- **WorkBC – Job Search**
<https://www.workbc.ca/>

Professional Associations' Career Resources

- **BC Electrical Association**
<http://www.bcea.bc.ca/jobs.php>
- **Electrical Contractors Association of BC (ECABC)**
<http://www.eca.bc.ca/jobs>
- **Vancouver Regional Construction Association**
<http://www.constructionjobcentre.ca/>

Identifying the Right Position

When you browse job advertisements, you'll find a range of different job titles that are relevant.

For ***construction electricians*** look for these related job titles:

- Electrician
- Apprentice Electrician
- Construction Electrician
- Domestic and Rural Electrician

For ***industrial electricians***:

- Electrician, Shipyard
- Industrial Electrician Apprentice
- Marine Electrician
- Mill Electrician
- Mine Electrician
- Plant Electrician
- Plant Maintenance Electrician

Creating a List of Potential Employers

You can use directories to produce lists of potential employers. Contact them directly to find out if they're hiring.

- **BC Electrical Association Member Directory**
http://www.bcea.bc.ca/member_directory.php
- **BC Regional Construction Association Member Directories**
<https://www.bccassn.com/about-us/regional-associations/>
- **Electrical Contractors Association of BC Member Directory**
<http://www.eca.bc.ca/pages/directory#action=AdvancedSearch&cid=669&did=4&listingType=0>
- **Reference Canada**
<http://www.vpl.ca/digital-library/reference-canada>

Click on "Start Search" beside Canadian Businesses, then select the "Advanced Search" button. Select both "Keyword/SIC/NAICS" under Business Type and "City" under Geography. In the top search box enter "*electric*" or "*electrical*" and click LOOKUP. Select the appropriate headings. Lower down, select the Province, choose the cities, and click the "View Results" button.

Available from the VPL Digital Library | Explore our Digital Library page

NOTE: *You can access this database from a Library computer. If you are using a computer from outside the Library, you will need a Vancouver Public Library card to login to this database. After clicking on the database name, you will be asked to enter your library card number and PIN (usually last four digits of your telephone number).*

4. Applying for a Job

In Canada, employers usually expect to receive a resume or curriculum vitae and a cover letter that identifies the position you are applying for and summarizes your relevant experience.

Use the library catalogue, <http://vpl.bibliocommons.com/> to find books on writing resumes and cover letters specific to your industry.

To learn about applying for jobs in Canada, use the following guides which are available in print at the Central Library or online at <http://skilledimmigrants.vpl.ca/>.

- **Writing Resumes and Cover Letters**

Go to <http://skilledimmigrants.vpl.ca>

[Search Writing Resumes and Cover Letters]

- **Getting Canadian Work Experience**

Go to <http://skilledimmigrants.vpl.ca>

[Search Getting Canadian Work Experience]

- **Networking for Employment**

Go to <http://skilledimmigrants.vpl.ca>

[Search Networking for Employment]

- **Learn More About Working in BC and Canada**

Go to <http://skilledimmigrants.vpl.ca>

[Search Learn More About Working in BC and Canada]

5. Getting Help from Industry Sources

Industry Associations

Associations for electricians in BC and Canada can provide information and assistance. Registration and fees may be required for membership.

- **BC Electrical Association**
<http://www.bcea.bc.ca/index.php>
- **BC Building Trades**
<http://www.bcbuildingtrades.org/>
- **Foreign Skilled Workers Program - BC Construction Association**
<http://www.fswbc.com/>
- **Skilled Trades Employment Program – BC Construction Association**
<http://www.stepbc.ca/>
- **Electrical Contractors Association of BC (ECABC)**
<http://www.eca.bc.ca/>
- **IBEW Local 213, International Brotherhood of Electrical Workers**
<http://www.ibew213.org/>

Industry Journals

Search the Vancouver Public Library catalogue for journals related to your profession. Examples at Central Library:

- **Electrical Business**
Available at the Central Library, 338.47 E3831E or online at:
<http://www.ebmag.com/>
- **Electrical Line**
Available at the Central Library, 621.305 E3831 or online at:
<http://electricalline.com/>

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**Questions? Please ask the Information Staff in the Central Library,
Vancouver Public Library or telephone 604-331-3603.**

Please note that the information in this guide is also available online through the
Skilled Immigrant InfoCentre website at <http://skilledimmigrants.vpl.ca/>.