



IMMIGRANTS & THE CLEAN TECHNOLOGY SECTOR

CLEAN TECHNOLOGY SECTOR IN BC AND METRO VANCOUVER

The world is seeing a profound shift toward green technologies and skills. According to a report from Canada’s Clean Technology Economic Strategy Table, Canadian cleantech exports were valued at \$7.8 billion in 2017 and could reach \$20 billion by 2025.

British Columbia is home to fully one-third of Canada’s cleantech companies. In the 2022 edition of the Global Cleantech 100 list, 12 companies were based in Canada, and of those, six were headquartered in B.C., including five in Metro Vancouver. British Columbia is also home to the world’s largest cluster of hydrogen and fuel cell companies.

Thanks in part to its history of electricity generated almost exclusively via hydro, B.C. industries have long been among the cleanest in the world, and the provincial government has committed to a 40% reduction in emissions by 2030, compared to 2007 levels.

The provincial government committed to providing one-time funding of \$25 million in 2022-23 to support clean energy, tech investments, and partnership opportunities with the federal government.

Through the CleanBC Roadmap to 2030, the B.C. government is working with industry and others across the province to reduce pollution, improve efficiency and adopt new technologies while staying globally competitive. Investment in these initiatives will generate an estimated 18,000 direct and spinoff jobs by 2050.

CLEAN TECHNOLOGY PROVIDES WELL-PAID JOBS AND GLOWING FUTURE PROSPECTS FOR BRITISH COLUMBIANS

BC Cleantech Status Report in 2019 showed the number of Cleantech companies had grown from 273 in 2016 to 293 in 2019, and the total number of employees had increased by 2,400 to 16,300, with 9,604 based in B.C. The average annual salary in 2019 was \$82,000, higher than all other sectors.

WHAT IS CLEAN TECHNOLOGY?

Cleantech refers to “technologies related to clean energy products, transmission, storage or use; water treatment and management; and/or efficiency in energy or resource management and use”. Cleantech companies were defined as those which primarily develop new technologies related to the following areas.

- Energy generation
- Resource–recovery and waste management
- Water and wastewater
- Transportation
- Building efficiency
- Transmission and storage
- Industrial efficiency
- Sustainable agriculture



CLEAN TECHNOLOGY SECTOR IN B.C.

The City of Burnaby has identified the Clean Technology industry as one of the city's key industries. "Growing green" is a fundamental theme in [Burnaby's Economic Development Strategy](#), and the city believes it is on its way to becoming one of the greenest cities in the world. Much of the progress stems from a leading role in the field of electrical utilities. While Metro Vancouver is more specialized in utilities than the rest of Canada, Burnaby has a higher share of employment in the utilities sector than Metro Vancouver as a whole.

A wide range of data cites the City of Vancouver as home to most B.C. Clean Technology companies. While this may be true, many of these base their research and development activities away from the head office, in many cases in Burnaby. BC Hydro is but one example, with a head office in Vancouver but more projects and employees in Burnaby.

The City of Burnaby also provides the head office location of many companies in the sector, including power technology, alternative/renewable energy (including bio fuels), green-related businesses in environmental services, providers of alternative transportation, and designers and manufacturers of environmental equipment. Burnaby has been working towards attracting businesses whose philosophies, business practices and employees are environmentally oriented. Businesses that provide products and services that could be considered part of the green economy, such as green building technology or alternative fuels, are a specific focus.

NOTABLE CLEAN TECH EMPLOYERS IN BURNABY

Azure Dynamics: <http://www.azureanalytics.com/careers/default.htm>

Aquasmart Technologies Inc.: <http://www.aquasmart.com/>

Acuva Technologies Inc.: <https://acuvatech.com/careers/>

Ballard Power Systems: <http://www.ballard.com/about-ballard/careers/>

BioteQ Environmental Technologies: <https://www.bqewater.com/contact/>

Associated Engineering: <http://www.ae.ca/careers.html>

BC Hydro: <http://www.bchydro.com/careers/>

CANTEST: <http://www.cantest.com/cms/page1011.cfm>

Covanta Energy Corporation: <http://www.covantaenergy.com/careers.aspx>

CH2M Hill Canada: <http://www.careers.ch2m.com/worldwide/en/>

Envirowest Consultants Inc. : <http://generalfusion.com/careers/>

Ekona Power: <https://www.ekonapower.com/careers>

General Fusion: <http://generalfusion.com/contact/>

International Water-Guard Industries Inc.: <http://www.water.aero/careers/>

IPEC Consultants Ltd: <http://www.ipec.ca/contact.html>

Legend Power: <https://www.bctechnology.com/companies/Legend-Power.cfm>

Loop Energy Inc.: <https://loopenergy.com/careers/>

Polar Battery Vancouver Ltd.: <http://www.polarbattery.com/>

Powertech Labs: <http://www.powertechlabs.com/home/>

Premier Lighting: <http://www.premier-lighting.net/>

Schneider Electric Canada Inc.: <http://www.schneider-electric.ca/en/>

Svante: <https://svanteinc.com/careers/>

Teckion: <http://www.tekion.com/>

Xantrex Technology Inc.: <http://www.xantrex.com/about-xantrex/jobs.aspx>

XEBEC Inc.: <http://www.xebecinc.com/about-careers.php>



LABOUR FORCE IN THE SECTOR

Most jobs in the Cleantech sector require professional certificates or university degrees. As the third most populous city in Metro Vancouver, Burnaby is home to 9% of Metro Vancouver's labour force. Census 2021 reports 38% of Burnaby's labour force has a bachelor's degree or higher, compared to 35% for the region.

The professional, scientific and technical services sector offers a number of cleantech-related jobs. In 2021, 17,000 Burnaby's residents worked in this sector, representing 11% of the Metro Vancouver total. Utilities is one of the main Cleantech subsectors. 1,030 Burnaby's residents work in the sector, representing 13% of the Metro Vancouver labour force within the Cleantech subsector.

Table: Labour Force and Jobs in Selected Municipality and Industry Sector, Censuses 2021
(Five municipalities with greatest labour force)

	Total labour force (15 years +)	Cleantech (Utilities, and Professional, scientific and technical services)	% municipal share of Greater Vancouver Clean Tech labour force
Greater Vancouver	1,435,305	168,70	100%
Vancouver	386,760	59,735	35%
Surrey	300,730	22,500	13%
Burnaby	133,720	18,030	11%
Richmond	105,145	11,620	7%
Coquitlam	79,140	9,777	6%

Numerous research projects have reported that immigrants, especially new immigrants, face tremendous challenges in finding jobs in their professional areas, including clean technology, because of foreign credential recognition, along with other barriers.

OCCUPATIONAL GUIDES AND PROFILES

The following websites provide a searchable selection of occupational guides.

- WelcomeBC - Work in BC <https://www.welcomebc.ca/Work-in-B-C>
- WorkBC Explore Careers <https://www.workbc.ca/Jobs-Careers/Explore-Careers.aspx>
- Skilled Immigrants InfoCentre - Vancouver Public Library <http://pwp.vpl.ca/siic/>
- National Occupational Classification 2021 - <https://noc.esdc.gc.ca/>



HIGH OPPORTUNITY OCCUPATIONS

The British Columbia Labour Market Outlook (2021 Edition) provides a list of high-opportunity occupations with the Cleantech Sector:

Occupation	Provincial median hourly wage (2020)	Job openings in B.C. (2021-2031)
Electrical and electronics engineering technologists and technicians (NOC 2011)	\$31.79	3,375
Biologists and related scientists (NOC 2121)	\$38.46	2,836
Civil engineering technologists and technicians (NOC 2231)	\$41.83	3030-3375
Chemical technologists and technicians (NOC 2211)	\$24.00	2,630
Geoscientists and oceanographers (NOC 2113)	\$24.00	2,050
Electrical and electronics engineers (NOC 2133)	\$52.40	1,990
Mechanical engineers (NOC 2132)	\$44.38	1,699
Biological technologists and technicians (NOC 2221)	\$37.50	1,590
Chemist (NOC 2112)	\$25.00	1,310
Chemical engineers (NOC 2134)	\$33.71	1,300
Geological engineers (NOC 2144)	\$48.88	1,270
Engineering managers (NOC 0211)	\$48.10	1,229
Geological and mineral technologists and technicians (NOC 2212)	\$50.00	1,110
Utilities managers (NOC 0912)	\$32.90	920
Other professional engineers, n.e.c. (NOC 2148)	\$43.27	292



USEFUL LINKS AND RESOURCES

KEY EMPLOYMENT PROGRAMS AND SERVICES

WorkBC Employment Service Centres

- Burnaby – Edmonds <https://www.workbc.ca/WorkBC-Centres/Mainland-Southwest/Burnaby-7297-Kingsway.aspx>
- Burnaby - Metrotown <https://www.workbc.ca/WorkBC-Centres/Mainland-Southwest/Burnaby-4211-Kingsway.aspx>

WorkBC Apprentice Service Centre
<https://workbcapprenticeservices.ca/>

Career Paths for Skilled Immigrants (Construction & Engineering) <https://issbc.org/service-types/career-paths-for-skilled-immigrants>

Burnaby has numerous employment programs and services for immigrants and refugees.

A complete listing of currently available and free programs and services can be found on this site's Immigrant Programs and Services (<https://newtobc.ca/settlement-information-for-newcomers/immigrant-and-refugee-programs-and-services/>). Select Burnaby under communities and Employment under categories and browse through the various programs to find one that meets your needs.

REGULATORY BODIES AND PROFESSIONAL ASSOCIATIONS

These provide more specific information relevant to their specializations.

- Applied Science Technologists & Technicians of BC <http://www.asttbc.org/>
- Association of Professional Biologists of British Columbia <https://professionalbiology.com/>
- Association of Professional Engineers & Geoscientists of British Columbia <http://www.apeg.bc.ca/>
- BC Centre for Innovation and Clean Energy <https://cice.ca/>
- BC Environmental Industry Association (BCEIA) <http://www.bceia.com/>
- BCTECH Association <http://www.wearebctech.com/>
- BCIC (BC Innovation Council) <http://bcic.ca/>
- BC Bioenergy Network <http://www.bcbioenergy.com>
- BC Community Energy Association <http://www.communityenergy.bc.ca>
- BC Sustainable Energy Association <http://bcsea.org>
- BC Utilities Commission <http://www.bcuc.com>
- Clean Energy BC <http://www.cleanenergybc.org>
- Fraser Basin Council <http://www.fraserbasin.bc.ca/>