



Clean Technology

Trailblazers in cleantech — sustainable growth happens here



British Columbia, *Naturally.*

BritishColumbia.ca

British Columbia (B.C.), Canada is home to world-class clean technology companies. The province offers a **skilled and educated workforce, a prime location** on Canada's West Coast and an **exceptional quality of life**.

If you want to locate your business in an ideal environment for technology investment and partnership opportunities, British Columbia is the right place to be — **it's where innovative technologies are flourishing** .

CleanBC Roadmap to 2030

British Columbia is at the forefront of green innovation. Since 2018, the province's continent-leading climate plan, CleanBC, has established B.C. as a key destination for new investment and industries looking to meet the growing global demand for low-carbon products, services and technologies. The CleanBC Roadmap to 2030, released in 2021, is an even more ambitious plan to further build a cleaner, stronger economy. The plan creates significant opportunities for B.C.'s cleantech sector.



Powering Our Future: B.C.'s Clean Energy Strategy

To build a cleaner economy and support growing communities, the province released B.C.'s Clean Energy Strategy in June 2024. This strategy focuses on energy efficiency, clean electricity, clean fuels and grid expansion. It aims to create a clean, competitive and inclusive British Columbia, powered by locally-produced clean energy and committed to achieving net zero emissions by 2050.



British Columbia's clean technology advantages

With an abundance of natural resources, low-cost clean power and a welcoming business environment, British Columbia is making **a cleaner future today**.

Exceptional Talent

Across British Columbia's broader tech ecosystem, a large, flexible and educated workforce of more than 210,000 is well represented by diverse and energetic talent. The cleantech sector in B.C. consists of over 200 companies employing more than 27,000 of these skilled individuals. British Columbia is continually investing in post-secondary programs and training to further develop and expand our local talent pool.



Thriving Clean Technology Ecosystem

British Columbia is home to about 20% of all Canadian clean technology companies. In 2022, the environmental and clean technology products sector in B.C. contributed \$12 billion to provincial GDP. Statistics Canada recorded that the environmental and cleantech sector grew to \$80.2 billion at the national level in 2022. Seven B.C. cleantech businesses are included in the 2024 Global Cleantech 100 Report, which lists companies from around the world with the most innovative and promising ideas in cleantech.

Clean Power in British Columbia

British Columbia has abundant water and clean, reliable electricity — 98% created directly from renewable resources, providing environmentally sustainable power at rates that are among the lowest in North America. While electricity demand in B.C. is expected to increase by 15% by 2030, BC Hydro is making significant investments to ensure continued access to reliable and clean electricity.



British Columbia's diverse cleantech sector is a leader in researching, developing and commercializing innovative new systems and products.

Industry Profile

Carbon Capture and Storage or Utilization

Carbon Engineering, based in Squamish, B.C., is pioneering Direct Air Capture of carbon dioxide from the atmosphere. The company's "air-to-fuels" technology can combine captured CO₂ with clean hydrogen to produce synthetic low-carbon fuels, among other potential uses. Another example is Svante Inc. based in Burnaby, B.C., who provides an adsorption process to capture carbon directly from flue gas from industrial sources.

Clean and Renewable Energy

British Columbia's abundant natural resources drive the development, testing and use of clean, renewable energy technology including wind, hydroelectric and biomass. For example, General Fusion, backed by the Canadian, U.K. and U.S. governments, is recognized globally as a leader in the development of fusion energy. Powertech Labs located in Surrey, B.C., is one of the largest testing and investigation facilities in North America for electric utilities, equipment manufacturers, industry, energy producers and transporters. The lab hosts an international customer base.

Clean Transportation

British Columbia leads the way in clean transportation technology. The industry's major manufacturers have already invested in and adopted B.C. innovations in fuel cell and natural gas engines. B.C.'s Westport Fuel Systems, for example, engineers the world's most advanced natural gas and hydrogen fuel engines, reducing both emissions and fuel costs and fundamentally changing the way the world travels. In June 2024, Westport Fuel Systems and Volvo Group announced their partnership to advance the commercialization of their HPDI fuel system using renewable fuels and hydrogen. As another example, Hydra Energy is sourcing low-carbon hydrogen from leading chemical partners in B.C., providing clean fuel to Hydra-retrofitted trucking fleets.

Energy Management, Efficiency and Storage

British Columbia is home to innovators in energy efficiency and smart measurement, monitoring and control, and energy storage. Vancouver based Awesense, for example, provides real-time energy analytics to modernize energy grids, while Clir Renewables is a cloud-based AI platform for renewable energy asset managers and owners.

Hydrogen and Fuel Cell Technology

British Columbia is home to an established and growing cluster of hydrogen and fuel cell technology companies providing clean-energy solutions for diverse applications including transportation, heating for buildings and industrial processes. Notably, Ballard Power Systems is a world leader in the development, manufacture, sale and servicing of hydrogen fuel cell power systems. The company's products are utilized in various markets, ranging from heavy-duty motive power to marine and rail applications.

Water and Wastewater Treatment

Leading water and wastewater treatment companies in British Columbia include Axine Water Technologies, which provides onsite treatment of toxic organic pollutants in industrial wastewater; Saltworks, which focuses on industrial wastewater treatment and lithium refining; and Acuva Technologies, which has developed an energy efficient UV-LED process with optical lensing for purification of drinking water.



Centres of Excellence

British Columbia's centres of excellence bring experts from the public, private and academic sectors together to collaborate on applied research, development and commercialization of new technologies.

| Centre of Excellence | Academic Institutions | Focus |
|---|---|--|
| Centre for Energy Systems Applications | British Columbia Institute of Technology | Develop, coordinate and support training and education in integrated energy systems applications |
| Centre for Interactive Research on Sustainability | University of British Columbia | Research on sustainable building technologies and urban development practices |
| Clean Energy Research Centre | University of British Columbia | Multidisciplinary research hub dedicated to undertaking clean energy research, training, development and demonstrations |
| Institute for Integrated Energy Systems | University of Victoria | Research on several themes related to integrated energy systems |
| Pacific Institute for Climate Solutions | University of Victoria, University of British Columbia, Simon Fraser University and University of Northern British Columbia | Research on low-carbon economy, climate change, sustainable communities and resilient ecosystems |
| SFU Hydrogen Hub | Simon Fraser University | Produce hydrogen, and test, scale-up and export hydrogen technologies and products |
| Sustainable Energy Engineering Facility | Simon Fraser University | Research and training for smart cities, clean transportation and sustainable manufacturing |
| UBC Okanagan Clean Technology Hub | University of British Columbia Okanagan | A central innovation space that catalyzes academic-industry collaborations to advance clean technologies |
| UBC Okanagan Advanced Materials for Energy Storage Lab | University of British Columbia Okanagan | Conducts research in batteries, electrochemistry and advanced manufacturing |
| UBC Smart Hydrogen Energy District | University of British Columbia | This is early stage though research and produce hydrogen using solar and hydro power to serve light- and heavy-duty vehicles |

Supportive Government

- The Integrated Marketplace links buyers with B.C. companies to implement, scale up and export B.C. technology while helping industry reduce carbon emissions and improve health and safety, increase productivity, build resiliency and more.
- The InBC Investment Corp. launched in 2021 and oversees a \$500-million strategic investment fund. These investments foster a low carbon economy, support lasting and meaningful reconciliation with Indigenous Peoples, help achieve greater diversity and inclusion, and contribute to a sustainable economy.
- In 2021, the B.C. Government partnered with the Government of Canada and Shell Canada to establish the B.C. Centre for Innovation and Clean Energy, with initial funding of \$105 million. The Centre brings together innovators, industry, governments and academics to accelerate the commercialization and scale-up of B.C.-based clean-energy technologies.
- The Scientific Research & Experimental Development Tax Credit allows qualified companies to claim tax credits for eligible expenditures while the Small Business Venture Capital Tax Credit allows corporations that invest in shares of registered venture capital corporation or eligible business corporation to receive tax credit including in clean technology.
- The province has a robust portfolio of grant programs for businesses. For example, the CleanBC Industry Fund has invested more than \$244 million into supporting industry projects that directly reduce industrial emissions, accelerate new emissions reduction technologies and study potential decarbonization opportunities.
- Since 2008, B.C.'s Innovative Clean Energy Fund (ICE) has committed over \$110 million to support pre-commercial clean energy technology projects, clean energy vehicles, research and development, and energy efficiency programs. The ICE Fund often partners with other funds to co-fund projects that advance B.C.'s clean energy sector and reduce greenhouse gas emissions, such as the \$40 million partnership between ICE and Sustainable Development Technology Canada (SDTC) to support the development of pre-commercial clean-energy projects and technologies.
- Through its Venture Acceleration Program, B.C. crown agency Innovate BC helps tech entrepreneurs in British Columbia accelerate the development of proven business models.
- British Columbia's general corporate income tax rate is 12%. When combined with the federal rate, businesses pay an overall rate of 27%.



British Columbia's Zero-Emission Vehicle (ZEV) Progress and Goals

- In 2023, light-duty ZEV sales represented 22.65% of all new light-duty vehicle sales in B.C.
- B.C. has one of Canada's largest public charging networks, with over 4,700 public charging stations at the end of 2023.
- The CleanBC Roadmap to 2030 sets more stringent targets for light-duty ZEV sales of 26% by 2026, 90% by 2030 and 100% by 2035.



British Columbia's Competitive Advantages

- Prime location on Canada's West Coast
- Large, flexible and educated workforce
- High quality of life
- Competitive corporate and personal income taxes
- Excellent public infrastructure
- Expert researchers and state-of-the-art research infrastructure
- A flourishing innovation ecosystem
- A leader in sustainable development



Join leading clean and climate tech companies, including:

- Ionomr Innovations ■ Mangrove Lithium
- MineSense ■ Moment Energy ■ Pani Energy
- Ph7 Technologies ■ Svante

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