



## Clean Tech

Trailblazers in clean tech — sustainable growth happens here



**British Columbia,** *Naturally.*

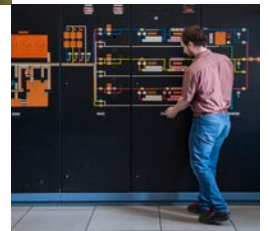
[BritishColumbia.ca](http://BritishColumbia.ca)

British Columbia, 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 a **world class 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 taking off**.

### CleanBC Roadmap to 2030

British Columbia (B.C.) 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 industry 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 stronger, more ambitious plan to further build a cleaner, stronger economy. The plan creates significant opportunities for B.C.'s clean tech sector.



### 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 131,000 is well represented by diverse and energetic talent. The clean tech sector in B.C. consists of nearly 500 companies employing more than 23,000 of these skilled individuals. British Columbia is also continuing to invest in post-secondary technology programming.



## Thriving Clean Technology Ecosystem

British Columbia is home to about 20% of all Canadian clean technology companies. In 2021, the environmental and clean technology products sector in B.C. contributed \$11 billion to provincial GDP. Statistics Canada estimates that the environmental and cleantech sector grew to \$73.1 billion at the national level. Six B.C. clean tech businesses are on the 2023 Global Cleantech 100, which lists companies from around the world with the most innovative and promising ideas in clean tech.

## Clean Power at Low Prices

British Columbia has abundant water and clean, reliable electricity — 98% created directly from renewable resources — providing a steady stream of environmentally sustainable power at rates that are among the lowest in North America. Discounted industrial electrification rates are available to attract clean tech customers seeking to use clean electricity in their green operations.



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

## 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 CO<sub>2</sub> with clean hydrogen to produce synthetic low-carbon fuels, among other potential uses. Another example is Svante Inc., which 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 while Powertech Labs is one of the largest testing and investigation facilities in North America for electric utilities, equipment manufacturers, industry, energy producers and transporters with 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 Innovations, for example, engineers the world's most advanced natural gas engines, vehicles and long-haul trucks, reducing both emissions and fuel costs and fundamentally changing the way the world travels. 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. 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

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, industrial processes and powering remote communities. Notably, Ballard Power Systems is a global innovator in PEM (proton exchange membrane) fuel cell technology, having designed and shipped 1 GW (1 gigawatt) of fuel cell stacks, systems to power clean energy solutions, and modules to date.

## Water and Wastewater Treatment

Leading water and wastewater treatment companies in British Columbia include Axine Water Technologies, which provides onsite treatment of organic pollutants in industrial wastewater; Saltworks, which focuses on industrial desalination, brine treatment and solids production; 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 green 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  |
|---|---|--|
| <b>Centre for Energy Systems Applications</b>                 | British Columbia Institute of Technology  | Research and training renewable energy technologies (geoexchange, photovoltaics and biomass lighting)        |
| <b>Centre for Interactive Research on Sustainability</b>      | University of British Columbia  | Research on sustainable building technologies and urban development practices                                |
| <b>Clean Energy Research Centre</b>                           | University of British Columbia  | Research and innovation on energy systems, bioenergy, decarbonization, data analytics and policy             |
| <b>Energy House</b>   | Northern Lights College   | Training on wind turbines, photovoltaics, solar thermal, biomass and geoexchange                             |
| <b>Institute for Integrated Energy Systems</b>                | University of Victoria  | Research on integrated energy systems  |
| <b>Pacific Institute for Climate Solutions</b>                | 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             |
| <b>Bioenergy Research Demonstration Facility</b>              | University of British Columbia  | Research on bio-energy   |
| <b>Sustainable Energy Engineering Facility</b>                | Simon Fraser University   | Research and training for smart cities, clean transportation and sustainable manufacturing                   |
| <b>UBC Okanagan Clean Tech Hub</b>                            | University of British Columbia Okanagan   | Promote clean technologies that convert carbon-based additives and components into new, sustainable products |
| <b>UBC Okanagan Advanced Materials for Energy Storage Lab</b> | University of British Columbia Okanagan   | Conducts research in batteries, electrochemistry and advanced manufacturing                                  |

## Supportive Government

- The Integrated Marketplace Initiative is a new program launched in 2022 that acts as a matchmaker to help bring together groups of larger buyers and innovative companies to help support clean tech adoption. This provides cleantech companies with opportunities to secure customers, evaluate performance and scale-up their business.
- 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 new B.C. Centre for Innovation and Clean Energy, with initial funding of \$105 million. The Centre will bring together innovators, industry, governments and academics to accelerate the commercialization and scale-up of B.C.-based clean-energy technologies.
- The provincial 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 B.C. investors to receive a 30% tax credit on eligible investments including in clean technology.
- The province has a robust portfolio of grant programs for businesses. For example, the CleanBC Industry Fund has invested about \$83.5 million in industrial emission-reduction projects.
- A \$40 million partnership between British Columbia's Innovative Clean Energy Fund (ICE) and Sustainable Development Technology Canada (SDTC) supports the development of pre-commercial clean-energy projects and technologies.
- Through its Venture Acceleration Network, B.C. crown agency Innovate BC funds the Foresight Cleantech Accelerator Centre to help advance B.C.'s growing clean tech industry.
- British Columbia's general corporate income tax rate is 12%. When combined with the federal rate, businesses pay an overall rate of 27%. B.C. has the lowest provincial personal income taxes in Canada for single individuals earning up to \$125,000.



- **B.C. is a leader in zero-emission vehicles (ZEVs) with the highest per capita adoption of ZEVs in North America (18.1% of light-duty vehicle sales in 2022).**
- **B.C. has one of Canada's largest public charging networks, with over 3,800 public charging stations at the end of 2022.**
- **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
- Renewable, reliable, low-cost power
- 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:

- Carbon Engineering ▪ Ekona ▪ General Fusion
- Ionomr Innovations ▪ Mangrove Lithium ▪ Minesense
- Moment Energy ▪ Pani Energy ▪ Svante

# British Columbia, *Naturally.*

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