

Cleantech Industry Snapshot:

Insights & Opportunities in the Metro Vancouver Region

April 2025



**INVEST
VANCOUVER**
A service of **metro**vancouver

Indigenous Territorial Recognition

Metro Vancouver acknowledges that the region's residents live, work, and learn on the shared territories of many Indigenous peoples, including 10 local First Nations: ḱíčə́y (Katzie), ḱʷa:ḱə́h (Kwantlen), kʷikʷə́ləm (Kwikwetlem), máthxwi (Matsqui), xʷməθkʷə́yəm (Musqueam), qíqéyt (Qayqayt), Semiahmoo, Skwxwú7mesh Úxwumixw (Squamish), scə́waθən məsteyəxʷ (Tsawwassen), and sə́lilwətał (Tseil-Waututh).

Metro Vancouver respects the diverse and distinct histories, languages, and cultures of First Nations, Métis, and Inuit, which collectively enrich our lives and the region.

About Invest Vancouver

By attracting strategic investment in key export-oriented industries, conducting research and analysis, and fostering collaboration on a local, national, and global scale, Invest Vancouver is facilitating the creation of high-quality jobs to achieve a resilient regional economy that delivers prosperity for all residents of the Metro Vancouver region. Working closely with leaders across all levels of government in the region and beyond, Invest Vancouver is addressing regional concerns to increase economic resilience, strengthening strategic export-oriented industries, attracting world-class companies, and laying the foundation for a region where every resident can thrive in today's rapidly evolving global economy.

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Cleantech in the Metro Vancouver Region

Decades of experience as a leader in green innovation

The Metro Vancouver region's growing cleantech sector is powered by a strong, interconnected ecosystem that fosters innovation, collaboration, and sustainable solutions. Here, "clean" isn't just a buzzword, and sustainability isn't an afterthought — it's at the core of how we innovate, build, and do business. From cutting-edge clean transportation to breakthrough renewable energy innovations, the Metro Vancouver region is a powerhouse of solution-driven companies tackling some of the world's biggest challenges.

The region is home to a dense concentration of innovators driving breakthroughs across cleantech verticals.

- **Over 260 cleantech businesses**¹ operate and provide a wide array of solutions, including **six** on the 2024 *Global Cleantech 100*.
- Cleantech firms headquartered in the region **raised \$5.4B USD (2020–2024)**.²
- **Leading research universities** like the University of British Columbia (UBC) and Simon Fraser University (SFU) foster innovation and produce highly skilled graduates.
- **49,000 people were employed** in BC's environmental and clean technology sector in 2023³, with a large share concentrated in the region.
- **98%** of electricity comes from clean or renewable sources.⁴

Six firms in the Metro Vancouver region made the 2024 Global Cleantech 100 list:

- **Svante** develops low-energy systems that sequester CO₂ emissions from industrial sites.
- **Ionomr Innovations** builds durable anion-exchange membranes for fuel cells, fuel production, and recovering metals.
- **Mangrove Lithium** creates modular platforms to reduce costs in producing battery-grade lithium hydroxide.
- **pH7 Technologies** pioneers innovative methods in extractive metallurgy to enhance metal extraction.
- **Moment Energy** repurposes retired electric vehicle batteries into clean energy storage systems.
- **MineSense** provides real-time, sensor-based ore sorting solutions that enhance mining efficiency and sustainability.

"The Metro Vancouver region punches well above its weight in the number of world-leading cleantech innovators produced."

– Cleantech Group

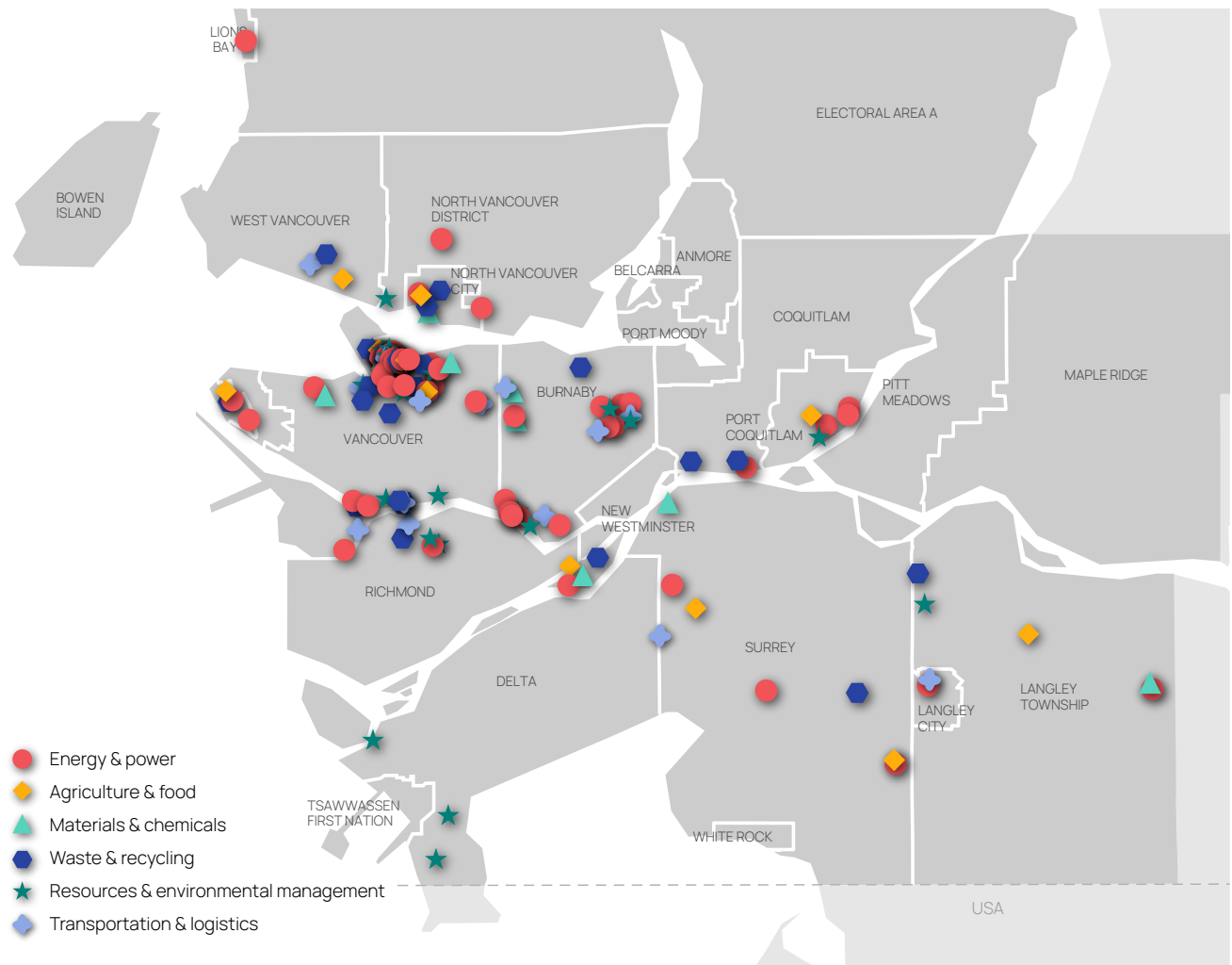
1 Cleantech Group, Catalyzing Investment in Cleantech Innovation in the Metro Vancouver Region (URL pending)

2 Invest Vancouver calculations based on PitchBook data.

3 Statistics Canada. Table 36-10-0632-01.

4 BC Government, Cleantech Sector in British Columbia

Cleantech firms in the Metro Vancouver region



Investment in cleantech firms headquartered in the Metro Vancouver region by vertical (2020-2024, USD millions)



SOURCE: CLEANTECH GROUP, PITCHBOOK, INVEST VANCOUVER.

Sector Support: Organizations & Incentives

Whether they're fostering global partnerships or developing next-gen technologies, the Metro Vancouver region is home to a world-class network of multidisciplinary research and innovation centres. Additionally, support exists at both the provincial and federal levels for innovation that helps create a cleaner future. Highlights include:

- Early-stage firms have access to **substantial grants and venture capital** and are supported by over 30 specialized accelerators and incubators, including **NorthX Climate Tech**, formerly known as the **B.C. Centre for Innovation and Clean Energy (CICE)** and **BC Research Inc.** Nearly **90%** of cleantech firms in the region survive the first five years—well above global averages.⁵
- **Clean Energy and Major Projects Office** is BC's one-stop shop for clean energy projects, streamlining regulations and offering guidance.
- **Clean Energy Research Centre (UBC)** is a multidisciplinary hub for research, training, development, and demonstrations of innovative clean-energy solutions.
- **MITACS** connects firms with researchers and talent, offering financial support and expert guidance for innovation projects.
- **Scientific Research and Experimental Development (SR&ED)** provides tax incentives for R&D that advances technological or scientific knowledge.
- **Innovative Clean Energy (ICE) Fund** supports projects advancing BC's clean energy, committing over \$114 million since 2008.
- **Canada Growth Fund (CGF)** is a \$15 billion public fund advancing Canada's cleantech deployment.

"The Metro Vancouver Region has established itself as a significant hub for cleantech innovation, with all of the ingredients necessary to support a thriving ecosystem."

– Cleantech Group



⁵ Cleantech Group, Catalyzing Investment in Cleantech Innovation in the Metro Vancouver Region (URL pending)

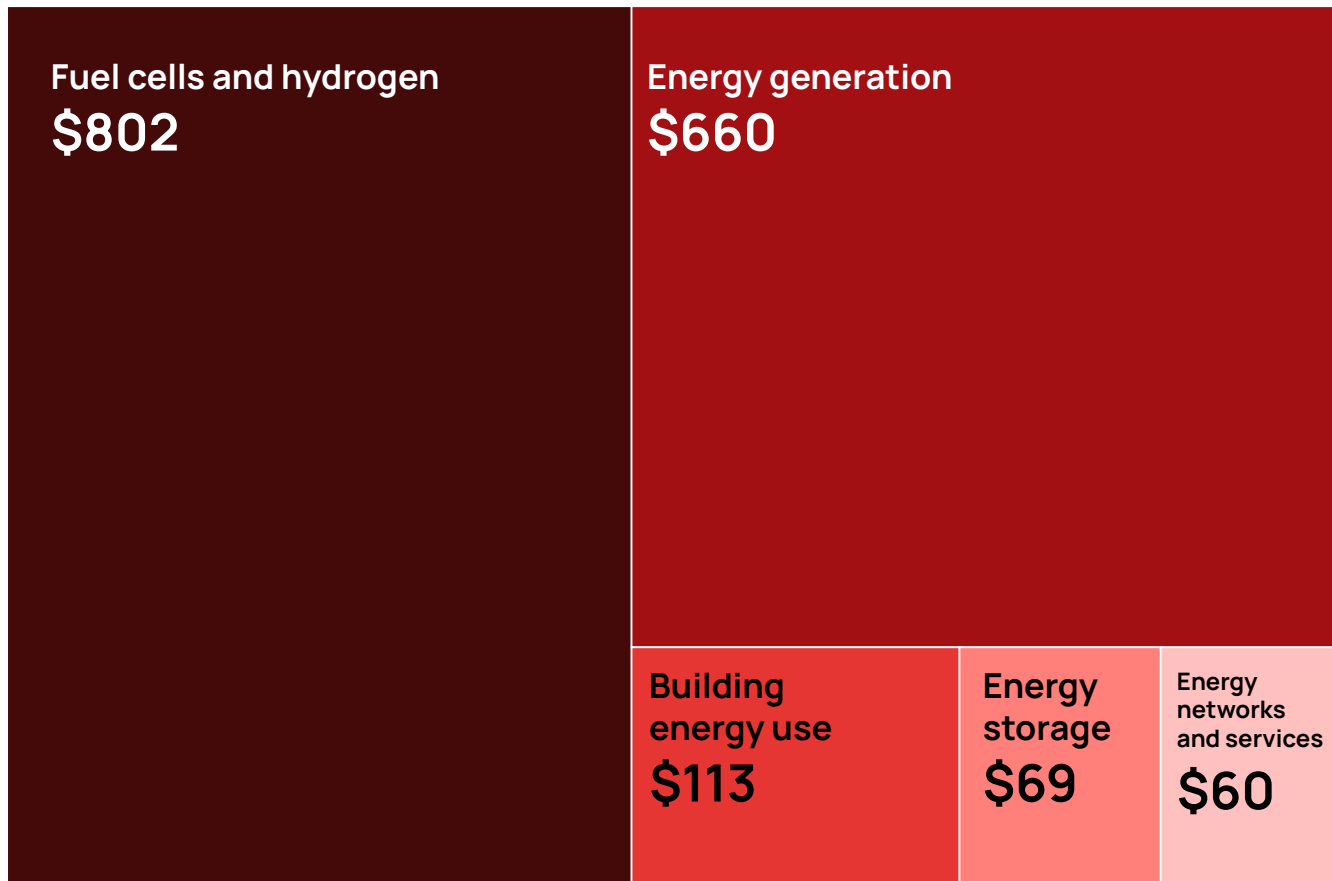


Cleantech in the Metro Vancouver Region – Energy & Power

Energy & Power includes building energy use, energy-efficient computing, energy generation (encompassing biomass energy, waste-to-energy, geothermal, hydro and marine power, nuclear fusion and fission, solar, and wind), energy networks and services, energy storage, and fuel cells and hydrogen.

Led by pioneering companies like **Ballard**, the region boasts a longstanding expertise and highly skilled workforce in hydrogen production and fuel cell development. Ballard's presence has not only anchored the Energy & Power subsector locally but also fostered ongoing innovation and technological advancements in clean energy solutions.

Nearly \$1.8 billion invested in energy & power firms headquartered in the region
(2020-2024, USD millions)



Some of the region's cleantech firms focused on energy & power include:

Fuel cells and hydrogen	Energy generation	Building energy use
Ballard Power Systems HTEC Westport Fuel Systems Loop Ekona Hydra First Hydrogen Cleantech Power Corp Solarvest BioEnergy NeoGreen Hydrogen Hydrion Energy Illuming Power Blue-O Technology CIMtech Mfg. G4 Insights General Hydrogen Hydrogen In Motion Hyfluence	NexGen Energy General Fusion EverGen Infrastructure Instream Energy Systems Etalim Swordfish Hydrokinetic Turbines Dual Fluid Aurora Solar Technologies	Intelligent City Miru mCloud Technologies Corp Green Matters Technologies Legend Power Systems Oxygen8 ATI Airtest Technologies VoltSafe Panevo SmartCool Systems Affine Climate Solutions CopperTree Analytics Delta Controls Enerpro Systems
	Energy storage	Energy networks and services
	Moment Energy Abound Energy Excell Battery Corvus Energy	Clir Renewables Tantalus Systems PowerTrust AWESENSE Powertech Labs

SOURCE: CLEANTECH GROUP, PITCHBOOK, INVEST VANCOUVER

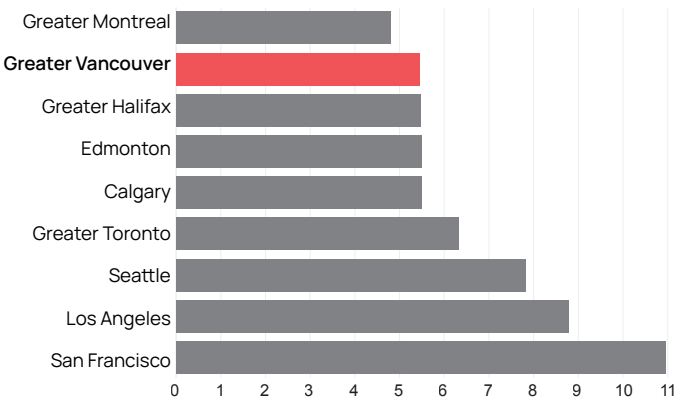
Energy & Power Highlight: Hydrogen and Fuel Cell Technology

The region hosts an expanding hydrogen and fuel cell technology cluster that includes engineers, manufacturers, and consulting firms specializing in alternative fuels. This cluster is supported by research institutions and universities, sector-specific accelerators and regulatory framework that enables its development and growth.

- **Over half** of Canada's hydrogen and fuel-cell companies are located in BC.⁶
- BC generates **60%** of research investment in hydrogen and fuel-cell development.⁷
- **1st province** in Canada to implement a hydrogen strategy.
- Hydrogen-specific incentives, specialized support from regional organizations, and comparatively lower costs than other jurisdictions (see chart).

“The ‘Silicon Valley’ of fuel cell technology” according to cellcentric, a 50:50 joint venture of Daimler Truck AG and the Volvo Group AB

Annual operating costs for Hydrogen firms



SOURCE: FDI BENCHMARK FROM THE FINANCIAL TIMES, 2024

6 BC Government, [BC Cleantech Profile](#).

7 Ibid

Company highlights:

- **Ballard Power Systems** is a global hydrogen company, with over 900 employees at its Burnaby headquarters. One of the oldest companies in the sector, Ballard began developing PEM fuel cells in the 1980s. Today, it designs, manufactures and sells fuel cell products that power zero-emission transit buses, trucks, trains, marine vessels, and forklifts.
- **cellcentric**, a German company and 50:50 joint venture of Daimler Truck AG and Volvo Group AB, is aiming to become a global leader in fuel cell manufacturing. cellcentric is developing fuel cell stacks for long-haul trucks in Burnaby. The region's unique pool of specialized talent was the key factor in the firm's decision to pursue the future of sustainable transportation here.

Firms in the region's specialized hydrogen and fuel cell ecosystem benefit from:

- **B.C. Hydrogen Strategy**, a set of 63 actions that set the course for BC to be a world leader in the hydrogen economy.
- **Smart Hydrogen Energy District (SHED)**, a UBC research facility integrating solar, hydro and hydrogen energy into a unified micro-grid.
- **SFU Clean Hydrogen Hub**, a research and innovation center focused on development and commercialization of hydrogen solutions.
- **Canadian Hydrogen Association (CHA)**, a non-profit organization that fosters collaboration between industry, government, and academia, providing advocacy, research, and networking opportunities.
- **Clean Hydrogen Investment Tax Credit**, a refundable tax credit of up to 40% of investments in projects that produce hydrogen.





Cleantech in the Metro Vancouver region – Agriculture & Food

Agriculture & Food spans a range of technologies and services focused on making food production more efficient, sustainable, and environmentally conscious, including innovations that reduce resource consumption, minimize waste, and lessen environmental impacts.⁸

The Metro Vancouver region's Agriculture & Food subsector benefits from the region's strategic location with access to diverse agricultural producers, established food-processing base, and robust technological ecosystem—key strengths that position local innovators for success.

Company Highlight:

Almanac (formerly SemiosBio Technologies Inc) provides an all-in-one crop management system that integrates advanced sensors, predictive analytics, and automated monitoring to deliver real-time agricultural insights. Their technology helps growers optimize production and minimize inputs such as pesticides. Since 2010, Almanac has raised \$225 million.

**Over \$1.1 billion invested in agriculture & food firms headquartered in the region
(2020-2024, USD millions)**



⁸ Although the cleantech Agriculture & Food subsector and agri-foodtech share common ground, there are some differences in scope and focus. The latter provides technological solutions for all aspects of agriculture and food processing, packaging, and distribution—including non-cleantech innovations—and is explored in separate report by Invest Vancouver.

Some of the region’s cleantech firms focused on agriculture & food include:

Crop inputs	Alternative proteins	Food waste
Terramera Lucent Biosciences	Konscious Foods No Meat Factory Maia Farms	Refeed Canada West Coast Reduction
Precision agriculture		Algae
Almanac Ecoation Innovative Solutions Verdi		PhyCo

SOURCE: CLEANTECH GROUP, PITCHBOOK, INVEST VANCOUVER





Cleantech in the Metro Vancouver Region – Materials & Chemicals

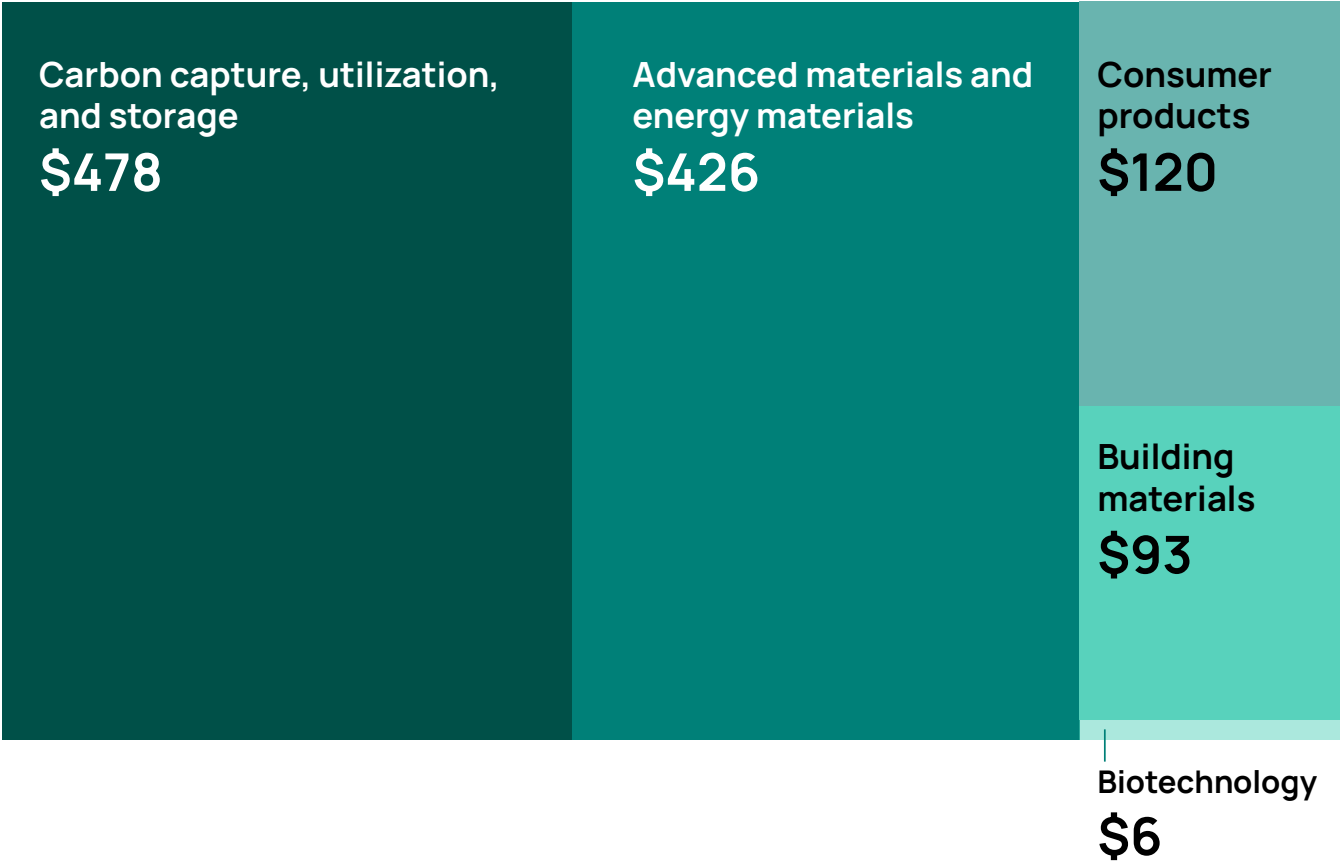
Materials & Chemicals spans a broad range of fields, including advanced manufacturing and process technology, building and industrial materials, carbon capture, utilization, and storage (CCUS), consumer products, and some fuels, chemicals, and specialty chemicals.

Firms in the Metro Vancouver region's Materials & Chemicals subsector excel in membrane, filtration, and electrochemical processes—innovations that are vital to the region's leadership in CCUS, fuel cell, and battery technology.

Company Highlight:

NORAM, a global electrochemistry leader established in 1988, has built a worldwide reputation for innovation in proprietary engineering and equipment packages—serving the chemical, pulp and paper, minerals processing, wastewater, and electrochemical sectors. Headquartered in Vancouver, they collaborate with local innovators and early-stage technology companies to provide engineering, fabrication, and commercialization expertise, while also undertaking large assignments for multinational clients and municipalities.

Over \$1.1 billion invested in materials & chemicals firms headquartered in the region
(2020-2024, USD millions)



Some of the region's cleantech firms focused on materials & chemicals include:

Carbon capture, utilization, and storage	Advanced materials and energy materials	Consumer products
Svante	NORAM The Metals Company NanoOne Materials Ionomr Innovations South Star Battery Metals pH7 Technologies Mangrove Lithium Temas Resources Bioform Technologies Dimension Five Technologies A2O Advanced Materials Performance BioFilaments EcoMine Technologies NanoTerraTech	Good Natured Products Evanesce Fable Earthcycle Packaging
		Building materials Nexii Terra CO2 AtlantisFiber SonoAsh
		Biotechnology Anodyne Chemistries

SOURCE: CLEANTECH GROUP, PITCHBOOK, INVEST VANCOUVER



Photo Credit: NESI





Cleantech in the Metro Vancouver Region – Waste & Recycling

Waste & Recycling encompasses a range of activities, including cleantech solutions for construction, fashion, waste management, and wastewater infrastructure, treatment, monitoring, and services.

In the Metro Vancouver region, strong research expertise in water, separations, and process control methods has led to the formation of numerous companies developing advanced waste and wastewater (organics) management technologies.

Company Highlight:

Anaconda Systems develops advanced aerobic digestion systems for municipal solid waste, building its first facility in the Metro Vancouver region. Its technology accelerates the breakdown of waste, saving time, lowering costs, and requiring less land area. By offering local waste-handling companies an alternative to trucking municipal solid waste outside the region, Anaconda Systems helps reduce both the environmental impact of waste management and operating expenses.

**\$535 million invested in waste & recycling firms headquartered in the region
(2020-2024, USD millions)**



Some of the region’s cleantech firms focused on waste & recycling include:

Waste management	Wastewater infrastructure, treatment, monitoring, and services
Andion North America Northstar Clean Technologies ChopValue RecycliCo Battery Materials Plastic Bank Atomofizer Trendi RecycleSmart Solutions Anaconda Systems Circular Rubber Technologies Debrand Intuitive AI Polymer Research Technologies Ronin8	Axine Viridis Research AWC Water Solutions

SOURCE: CLEANTECH GROUP, PITCHBOOK, INVEST VANCOUVER





Cleantech in the Metro Vancouver Region – Resources & Environmental Management

Resources and Environmental Management covers a broad array of activities, including carbon management and removal, climate risk and resilience, and both environmental monitoring and remediation. It also encompasses natural resource management—spanning land use, forestry, mining, and biodiversity—as well as water provision, management, monitoring, and analysis.

The region has significant expertise in separations technologies in mining, carbon removal, and water treatment, supported by a concentration of mining and forestry offices. Additionally, the region's comparatively strict waste disposal regulatory framework positions it as a hub for creating partnerships and demonstration opportunities for advanced local solutions.

Company Highlight:

Ideon Technologies' proprietary sensors, imaging systems, and applied artificial intelligence innovations allow mining firms to locate mineral deposits more precisely and less invasively, thereby minimizing the expense, waste, and greenhouse gases associated with mining. Ideon draws its workforce from a regional labour pool that includes concentrations in multiple fields related to computers, software, and engineering.

\$346 million invested in resources & environmental management firms headquartered in the region (2020-2024, USD millions)

Environmental monitoring \$211	Carbon management \$48	
	Carbon removal \$30	Water provision, management, monitoring, and analysis \$27
		Environmental remediation \$11
		Natural resource mgmt \$8

Some of the region’s cleantech firms focused on resources & environmental management include:

Environmental monitoring	Carbon removal	Environmental remediation
Weir Motion Metrics MineSense Ideon Technologies SenseNet OnDeck Fisheries AI Nanozen Bayes Studio Inc	Arca CO280 CO2 Lock	EnviroMetal Technologies
Carbon management	Water provision, management, monitoring, and analysis	Natural resource management
Key Carbon DevvStream	CarboNet Aquatic Informatics Saltworks SHARC International Systems Aqua Intelligent Technology Point Four Systems	Leading Edge Materials Corp

SOURCE: CLEANTECH GROUP, PITCHBOOK, INVEST VANCOUVER





Cleantech in the Metro Vancouver Region – Transportation & Logistics

Transportation & Logistics covers vehicles, technologies, and services focused on moving people and goods with zero or low emissions, or in a more resource-efficient manner. This includes autonomous and connected vehicles, digitization, electric vehicles and charging infrastructure, logistics services, mobility solutions for both people and goods, new mobility business models, sharing infrastructure, and transportation software.

The Metro Vancouver region's strengths in clean transportation—combined with its strategic West Coast location, major port, well-connected international airport, and robust tech ecosystem—create a prime environment for local firms to develop and deploy innovative Transportation & Logistics solutions.

Company Highlight:

Founded in 2015, **ENVO** is a Burnaby-based e-mobility innovator whose portfolio of electric vehicles includes bikes, trikes, scooters, snowbikes, snowcarts, velomobiles, and ATVs. The company combines Canadian engineering with a strategic mix of in-house and overseas production and assembly based on cost and product complexity. ENVO is creating products for a greener future by offering lightweight, efficient, and eco-friendly alternatives to fossil-fuel vehicles for recreation, services, and daily commuting.

\$490 million invested in transportation & logistics firms headquartered in the Metro Vancouver region across multiple verticals (2020-2024, USD millions)

On-road vehicles \$43	Vehicle systems \$28	Electric vehicle EV charging \$17
		Vehicle components \$17

Some of the region’s cleantech firms focused on transportation & logistics firms include:

On-road vehicles	Electric vehicle EV charging	Vehicle components
GreenPower Bus	Hypercharge Networks Portable Electric Plugzio	ACEL Power Daanaa Resolution
Vehicle systems		Micromobility
Hillcrest Energy Technologies Mojio		ENVO

SOURCE: CLEANTECH GROUP, PITCHBOOK, INVEST VANCOUVER





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Invest Vancouver provides tailored services to help your business grow and expand into the Metro Vancouver region. Our team helps you navigate the region's business landscape by connecting you with key partners, arranging ecosystem tours, and providing assistance in the site selection process. We offer strategic advice, industry insights, and market intelligence to support your investment decisions.



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