

Innovation in Clean Transportation

Advantages and Specializations in the Metro Vancouver Region

INVEST
VANCOUVER

Sector Highlights

60 Firms

Operating in the region

2,800+ Employees

Median firm employment: 21

\$2.6 Billion+ Invested

From 2017 to 2021

Anchored by a world-leading **hydrogen cluster**, these firms are scaling-up across many clean transportation specializations:



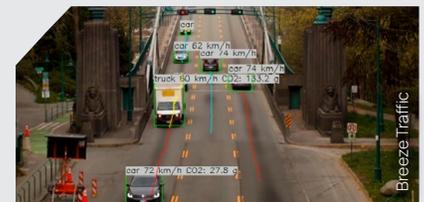
Low & Zero Emission Vehicles & Components

Alinker, **AVL Fuel Cell Canada Inc.**, **Ballard Power Systems**, **Blue-O Technology**, **cellcentric**, Corvus Energy, Damon Motorcycles, ElectraMeccanica Vehicles, **FTXT Energy Technology**, FVT Research, GreenPower Motor Company, Grin Technologies, **Ionmr Innovations**, **Loop Energy**, Molicel, Nano One Materials, Rivian, Robert Allan Naval Architects and Marine Engineers, Sandvault, **Unilia Fuel Cells**, VeloMetro Mobility



Renewable & Low Carbon Fuels & Charging Infrastructure

AddEnergy Technologies, Analytics Systems, Consolidated Biofuels, Daanaa Resolution, Delta-Q Technologies, **Ekona Power**, Electrum Charging Solutions, Enbala, EverGen Infrastructure, G4, Greenlane Renewables, **Greenlight Innovation**, **HTEC Hydrogen Technology and Energy Corporation**, **Hydra Energy**, **Hydrogen in Motion**, IRDI System, Lab 498 Products/VoltSafe, **Palcan Power Systems**, Parkland Fuels, **Powertech Inc.**, Quadrogen, Recharged Technologies, Shift Clean Energy, Tandem Technologies, West Coast Reduction, Westport Fuel Systems



Transferable Technologies & Services

7 Generation Capital, Breeze Traffic, Freightera, Greenline Technologies, Liftango, LOOPShare, Mojjo, Plugzio, Poparide, Routific, Spare, Uplight, VuLog

Firms identified in **green** are within the hydrogen cluster.

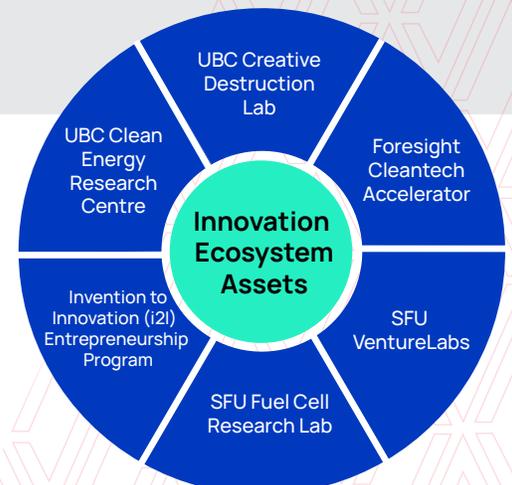
Metro Vancouver's clean transportation sector

is buoyed by world-renowned research institutions and universities, sector-specific accelerators, and a supporting incentive and regulatory environment. Firms across the clean transportation industry value chain say their top reason for locating in the region is the access to a deep pool of talent across the educational attainment continuum.

The Metro Vancouver region has identified labour concentrations in the occupational categories:

- Mechanical Systems Engineers
- Infrastructure Team Leads
- Fuel Systems Engineers
- Test Engineers
- Research Scientists/ Engineers

Source: EMSI 2021.1



Opportunity Amplified. In a region like no other.

By 2050, clean hydrogen will make up as much as 25% of our net-zero energy mix, generating a **\$20 trillion** infrastructure investment opportunity.
 – Bloomberg New Energy Finance (2020)

Damon Motors

Capital Investment in Clean Transportation (2017-2021)

Investment in Firms Headquartered in the Region

Year	\$ invested (millions)	Deal count
2017	94	22
2018	271	7
2019	102	19
2020	663	21
2021	1,536	16

Source: Pitchbook 2021

Where People Are Investing

- 67%** Low & Zero Emission Vehicles & Components
- 29%** Renewable & Low Carbon Fuels & Charging Infrastructure
- 4%** Transferable Technologies and Services

Source: Pitchbook 2021

2021 Deals Highlights

- \$922M cellcentric (Daimler Truck AG and Volvo Group)
- \$217M HTEC
- \$139M Westport Fuel Systems
- \$100M Loop Energy

Source: Pitchbook 2021

Sector Support

- [B.C. Hydrogen Strategy](#) is setting the course for B.C. to be a world leader in the growing hydrogen economy
- [Scientific Research and Experimental Development \(SR&ED\)](#) tax programs to encourage Canadian businesses of all sizes and in all sectors to conduct research and development (R&D) in B.C. and Canada
- [B.C. Low Carbon Fuel Standard](#) provides a financial incentive for low carbon fuel use. This generates revenue for low carbon transportation fuel suppliers and supports investment in clean fuels and vehicles
- [CleanBC Go Electric Advanced Research and Commercialization \(ARC\) program](#) supports the development of companies operating in the zero-emission vehicle (ZEV) sector
- [B.C. Centre for Innovation and Clean Energy](#) will be an incubator for the research and commercialization of technologies, including carbon capture, utilization and storage, production and distribution of low-carbon hydrogen, biofuels, synthetic fuels, renewable natural gas, and battery technologies

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