

Company Case Study: Cleantech



About Hydra Energy

Hydra Energy is a trailblazer in clean technology, specializing in producing low-carbon hydrogen and retrofitting heavy-duty trucks for hydrogen combustion. Established in 2012 in West Vancouver, Hydra Energy operates out of Delta, British Columbia with a team of 15 employees.

The company addresses the “chicken-and-egg” problem of hydrogen adoption—widespread hydrogen infrastructure won’t develop without demand from hydrogen-powered vehicles, but demand for such vehicles won’t grow without available infrastructure—by providing a turnkey solution that includes both hydrogen fuel supply and vehicle retrofitting. By tackling both supply and demand challenges, Hydra Energy is redefining sustainable transportation and contributing to Canada’s decarbonization goals.

Recognized for its innovation and market potential, Hydra Energy was named to the Foresight 50 list as one of Canada’s most investable cleantech ventures. This distinction, awarded by Foresight Canada in partnership with Clean50 and Gowling WLG, highlights Hydra Energy’s impact on the clean energy industry and its role in advancing hydrogen solutions within the growing cleantech cluster in British Columbia.

Why the Metro Vancouver Region?

Hydra Energy started its operations in Delta, initially drawn to the city’s more affordable leases and available industrial space. The company deepened its roots over time and continues to benefit from the strength of the region’s hydrogen ecosystem and access to top-tier talent. Patrick Steiche, Hydra Energy’s Director of Innovation, noted, “the hydrogen hub here positions the Metro Vancouver region as a global leader in the hydrogen space. This ecosystem has been incredibly beneficial for our growth and collaborations.”

The company also benefits from provincial funding, which ties its operations to British Columbia. “Whenever we secure funding from agencies, we commit to staying within the province, ensuring our continued contribution to the local economy and innovation landscape,” Steiche added.



Talent and Research Partnerships

Hydra Energy's success is closely linked to the talent pool fostered by top universities across the region. The company has established long-standing partnerships with the University of British Columbia (UBC) and Simon Fraser University (SFU), accessing funding through programs like MITACS – a national, non-profit organization that connects businesses with post-secondary institutions to support innovation through research internships and training programs or Natural Sciences and Engineering Research Council Alliance Program (NSERC Alliance Program).

These collaborations have been pivotal in advancing Hydra Energy's R&D and building their workforce - many of their engineering roles have been filled by former interns. "Our partnerships with academia ensure we get access to highly skilled students globally, and nearly everyone we work with has been excellent," said Steiche.

By tapping into the Metro Vancouver region's strong research institutions and academic networks, Hydra Energy has been able to attract top engineering talent and foster long-term innovation in hydrogen technology.

Looking Ahead

Hydra Energy has ambitious growth plans, aiming to add five additional engineers in the next two to three years. The company remains committed to its mission of decarbonizing heavy-duty transportation and contributing to a sustainable hydrogen economy.

By staying rooted in the Metro Vancouver region, Hydra Energy leverages the region's unique advantages while driving the future of clean energy innovation. As the company scales its operations, it continues to play a vital role in shaping the hydrogen economy in British Columbia and beyond.



Scaling Clean Energy & Power Technologies

While Hydra Energy's commercial projects are focused in the Prince George region, the Metro Vancouver region remains a strategic hub for hydrogen innovation due to its strong research ecosystem and access to funding.

Funding from federal agencies such as the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP) and provincial programs from NorthX Climate Tech (formerly known as the B.C Centre for Innovation and Clean Energy) has further enhanced Hydra Energy's ability to develop innovative hydrogen solutions. These programs support both short-term R&D projects and long-term PhD research, creating a sustainable pipeline of talent and innovation. "The support we've received from programs like "[NorthX Climate Tech] and IRAP has been instrumental in driving our clean energy innovations forward," said Steiche.

By providing access to R&D funding, research partnerships, and a growing cleantech ecosystem, the Metro Vancouver region continues to support companies looking to develop and scale hydrogen technologies in Canada.

"Over the years, we've built strong partnerships and research collaborations with UBC and SFU. In fact, my role at Hydra Energy began as part of a research project while I was a student at UBC. After the project received funding, the company hired me, demonstrating how these collaborations directly contribute to talent development."

– Patrick Steiche, Hydra Energy



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