

# HYDROGEN IN CANADA

Hydrogen is the only fuel with the potential to decarbonize the economy everywhere in the world. Hydrogen is especially attractive for large emission sectors such as long-distance commercial transportation, heating of large buildings and high-heat industries such as metals manufacturing.

Advances in hydrogen technologies and growing recognition of its importance to a net-zero future has prompted the creation of a comprehensive hydrogen strategy for Canada, released in 2020.

## THE FUTURE OF HYDROGEN IS IN CANADA

Currently among the top 10 hydrogen producers in the world, Canada is well positioned to be one of the top three clean hydrogen producers by 2050.

Global investors looking to Canada's low-cost, low-carbon hydrogen industry will see environmental benefits that include reduced greenhouse gas (GHG) emissions that help abate climate change and improve air quality, as well as economic advantages through a world-leading cleantech ecosystem powered by highly skilled workers.

## CANADA'S ADVANTAGES IN HYDROGEN

Canada has among the lowest carbon intensity electricity supplies in the world. This is attributable to Canada's widespread hydroelectric generation capacity – it is the world's second largest producer of hydroelectricity – and its status as a Tier-1 nuclear region, plus growing wind and solar power capacity.

Canada also has abundant fossil fuel reserves, suitable geology for CO2 storage, potential for growth in variable renewables, large-scale biomass supply and freshwater resources. All these resources can be leveraged to produce low-carbon hydrogen at a competitive price.

Forward-looking companies are converting Canada's fossil fuels to low-cost, low-carbon hydrogen through innovative reformation and carbon capture, utilization and storage (CCUS) technologies.

# 170+

Established hydrogen and fuel cell technology companies in Canada

Source: Canadian Hydrogen and Fuel Cell Association, 2024

# \$50B

Projected value of domestic market for hydrogen and related products in Canada, by 2050

Source: Natural Resources Canada, National Hydrogen Strategy, 2020

# 68%

Projected decrease in cost of green hydrogen by 2030

Source: Harvard Business School, 2023

# 50%+

Percentage of the world's fuel cell electric buses (FCEBs) in revenue service powered by Canadian heavy-duty (HD) fuel cell engine technology

Source: Natural Resources Canada, National Hydrogen Strategy, 2020

"Canada is an ideal location for establishing the first Hy2gen's carbon-free hydrogen productions in North America due to the fact that the central and local governments are strongly committed to the reduction of GHGs by supporting hydrogen business, carbon-free mobility, and carbon reduction in the industrial sector."

— Cyril Dufau-Sansot, CEO, Hy2Gen AG, Holzgerlingen/Germany



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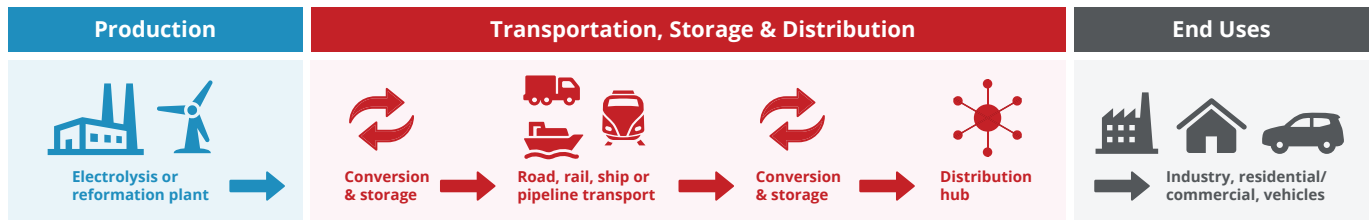
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# CANADA'S LOW-CARBON HYDROGEN VALUE CHAIN



## EXTENSIVE SUPPORT FOR HYDROGEN INVESTMENT

The Canadian government's 2023 budget and Fall Economic Statement include numerous highlights for hydrogen investors:

- **Investment Tax Credit for Clean Electricity** – a 15% refundable tax credit for eligible investments in non-emitting electricity generation systems (wind, solar, hydro, wave, tidal and nuclear)
- **Investment Tax Credit for Clean Technology Manufacturing** – a refundable tax credit equal to 30% of the cost of investments in new machinery and equipment used to manufacture or process key clean technologies, and extract, process, or recycle key critical minerals
- **Investment Tax Credit for Clean Hydrogen** – a refundable tax credit ranging from 15 to 40% of eligible project costs, as well as a 15% tax credit on equipment needed to convert hydrogen into ammonia for transport
- **Clean Technology Investment Tax Credit** – a refundable investment tax credit of 30%
- **Reduced Tax Rates for Zero-Emission Technology Manufacturers** – reduced (by half) corporate income tax rates extended by three years to 2034
- **Carbon Capture Utilization and Storage Investment Tax Credit** – a refundable tax credit of up to 60% on capture equipment
- **Strategic Innovation Fund** – a \$500 million fund for the development and application of clean technologies
- **Canada Infrastructure Bank** – an increased mandate to invest in clean power and green infrastructure

There are also over a dozen different provincial funds and programs applicable to hydrogen investments.

## RECENT INVESTMENT ANNOUNCEMENTS

**SK ecoplant (South Korea)** announced the acquisition of a 20% stake in World Energy GH2's Nujiq'onik green hydrogen project in Newfoundland and Labrador. The project, with a phase one budget of \$4.5 billion, will produce green hydrogen and green ammonia. *(May 2023)*

**EverWind Fuels (U.S.)** announced a \$7.9 billion investment in a zero-carbon hydrogen and ammonia production facility in Point Tupper, Nova Scotia. *(May 2022)*

**Air Products (U.S.)** announced plans to build a \$1.3 billion hydrogen facility in Edmonton to produce hydrogen derived from natural gas. *(June 2021)*

## NOTABLE HYDROGEN INDUSTRY COMPANIES



## CONTACT

Invest in Canada promotes, facilitates and accelerates foreign direct investment (FDI) into Canada. It is the global investor's primary point of contact. Reach out to speak with a dedicated advisor.

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