Technology Partnerships Canada

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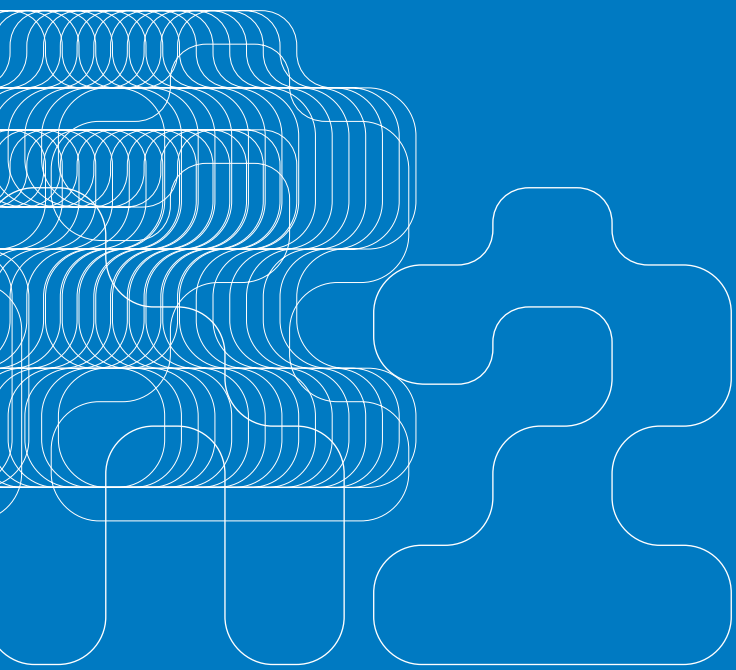
h2 Early Adopters Program



Canada

Hydrogen

Clean. Reliable. Renewable.
Hydrogen just makes sense.

Able to fuel our cars, heat our homes and provide a lasting, renewable energy source today and tomorrow, hydrogen offers the potential of real, achievable quality of life improvements for all Canadians.

It contains more energy than any other known energy carrier — three times that contained within an equal weight of gasoline.

It has the potential to be a clean and nearly limitless fuel supply for the future.

Its use could help to reduce pollution, improve our economy and fuel our industries.

In its natural or gaseous state, hydrogen is colourless, odourless and non-toxic — unlike many of the fuel sources in use today. Also, hydrogen is so light that it floats and disperses immediately, making its use as safe as any other energy source currently in use.

Hydrogen fuel technologies offer unlimited potential: promising cleaner air, better health and the knowledge that our natural resources, and our planet, will be protected for years to come.

Canadian companies are harnessing this potential to develop innovative, real-world energy solutions.

These are real and achievable goals for the hydrogen industry, and for Canada.

How does a fuel cell work?

Fuel cells, the hydrogen version of a battery, combine hydrogen with oxygen to produce combustion free electricity.

H_2 + O_2 = Energy, Water and Heat

Unlike a conventional battery, which only stores energy, a fuel cell is capable of producing it — as long as oxygen and hydrogen are supplied.

When combined with solar, wind or hydroelectric power generation, hydrogen fuel cells are able to provide a clean and sustainable power supply.

Although still at the pre-commercialization stage, fuel cells are being tested for use across industry and throughout our daily lives: with early adoption demonstrations of mass transit, utility vehicles, power generation and domestic electrical supply applications currently under way.

In the years to come, fuel cells will:

- *provide back-up power supply for industry;*
- *heat homes and buildings;*
- *fuel cars, buses and other vehicles;*
- *eventually be used anywhere electrical power is required.*

Hydrogen Early Adopters (h2EA) program

The Government of Canada's plan for a hydrogen economy is a vision of the future in which energy needs are met through the use of renewable resources.

To make this a reality demands strong, committed leadership and a partnership with industry and indeed all Canadians.

The TPC h2EA program invests in showcasing Canadian industry using and applying hydrogen technologies, encouraging industry leaders and competitors to work together to invent and innovate.

The program encourages the awareness and acceptance of these groundbreaking technologies through their installation and demonstration in transportation, residential and commercial power generation applications. Concepts such as "hydrogen highways" and "hydrogen villages" are being realized, bringing these technologies together and providing a testing ground and establishing codes and standards to allow this innovative and promising industry to grow and advance.

Through the funding of real-world applications for hydrogen technologies, the TPC h2EA program demonstrates to Canadians that our hydrogen industry is at the forefront of innovation: working hard to ensure a clean and sustainable future.

The program is a symbol of Canadian knowledge and recognized leadership in this rapidly advancing field.

It is an affirmation of the Government of Canada's commitment to our economy, and our future.

Want to learn more?

A number of companies and organizations are currently involved in the development and installation of hydrogen and hydrogen compatible technologies across Canada.

In addition, the Government of Canada is committed to furthering research and development into these technologies with the vision of developing a strong, and world-leading hydrogen economy in Canada.

For more information, please visit the TPC h2EA Web site at:

www.tpc-ptc.ic.gc.ca/h2

or call:

1-800-391-3363

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