Hydrogen Opportunity

The global hydrogen economy is a $2.3T global opportunity. The Edmonton Metropolitan Region is acting as an early mover in hydrogen energy, forging key partnerships and securing investment to build out hydrogen infrastructure.

The region is poised to become the center of Canada's hydrogen economy and a global hub for hydrogen production and export. The potential to radically transform our regional economy and dramatically decarbonize Western Canada is here.

EDMONTON GLOBAL'S ROLE

What we are working towards...

- A full-value hydrogen chain
- Established export market
- Investment attraction

Our Hydrogen Vision: Beyond Energy—Edmonton Global is the catalyst bringing partners from across Canada and around the world, leading to the transformation of the Edmonton Metropolitan Region into the center of Canada's net-zero hydrogen economy, and a global model for what's possible.

THE ROLE OF PARTNERSHIPS

We are taking a collaborative approach in developing our regional hydrogen economy, engaging all levels of government, academia, industry, and Indigenous communities.

Our Partners:

- Municipalities within the region
- Alberta Industrial Heartland Association
- Enoch Cree Nation
- Alexander First Nation
- Transition Accelerator
- Invest Alberta
- Invest in Canada
- Alberta Innovates
- Regional and international hydrogen industry leaders
- Government of Alberta
- Government of Canada

WHAT WILL A HYDROGEN TRANSITION MEAN FOR THE REGION?

Hydrogen is internationally recognized as fuel to decarbonize heavy freight, shipping, buses, planes and space heating in cold climates. It can also be used as a low-carbon feedstock for industry.

The hydrogen economy will create jobs for Albertans working in the traditional energy sector, ensuring expertise is transferrable to new net-zero energy roles.

The region already produces 2250 tonnes of hydrogen per day at sites including Shell Canada Ltd.'s Scotford refining complex, the NorthWest Refinery and a Nutrien Ltd. fertilizer plant.

The export market will be orders of magnitude larger; this is a $2.3T global opportunity.

About CCUS

Carbon capture, storage and utilization technology plays a critical role in reducing industrial emissions. In hydrogen production, excess CO2 from power generation is captured for other uses or sequestered. The Edmonton region has advanced carbon capture and storage infrastructure as well as the world's largest CO2 pipeline.

HYDROGEN ENERGY IN THE EDMONTON REGION AND ALBERTA

LOW-COST

Alberta's plentiful natural gas supply helps to produce some of the lowest cost and cleanest hydrogen in the world at mass scale.

COMPETITIVE TECHNOLOGY

Specialized expertise and continuous improvement in carbon capture technology, pipelines and natural gas production position Alberta as a leader in net-zero production.

NET-ZERO

The region is home to the world's largest net-zero hydrogen production facilities; leveraging advanced carbon capture technology.

ESG IMPACT

A hydrogen economy will help industry and government achieve net-zero commitments. Engagement among the four orders of government, including Indigenous government, will lead to meaningful outcomes.

GOVERNMENT STRATEGY

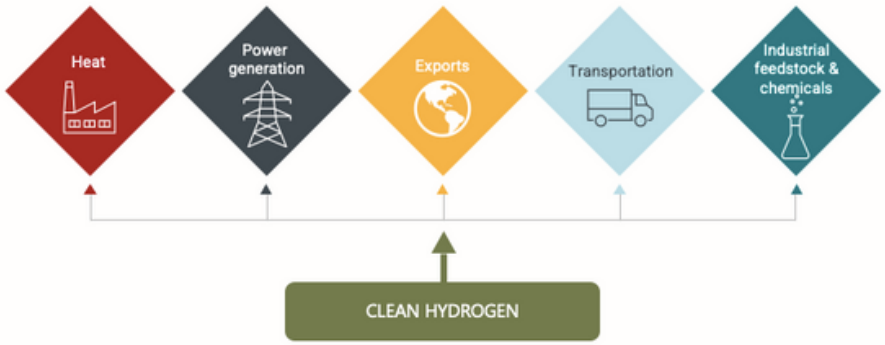
Federal and provincial strategies and incentives support the hydrogen transition. The Edmonton Region Hydrogen Hub was established to accelerate the regional hydrogen economy.

FUEL INFRASTRUCTURE

Existing pipelines can be leveraged to develop vital fueling station corridors and pipeline networks throughout the region and to the airport.

Potential Markets

- Heavy Haul Transport (bus fleets and freight vehicles)
- Residential and Commercial Building Heating - blending hydrogen into existing natural gas grids
- Power Generation



Air Products Canada recently made a $1.3B investment to build a net-zero hydrogen energy complex in the Alberta Industrial Heartland in Edmonton. The complex will produce over 1,500 tonnes of hydrogen/day and divert 3 million tonnes of atmospheric CO2/year.

The Transition Accelerator and the creation of the Edmonton Region Hydrogen Hub bring together industry and all four orders of government (federal, provincial, municipal and Indigenous) to accelerate demand across sectors and increase production capacity.

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