



PROTON

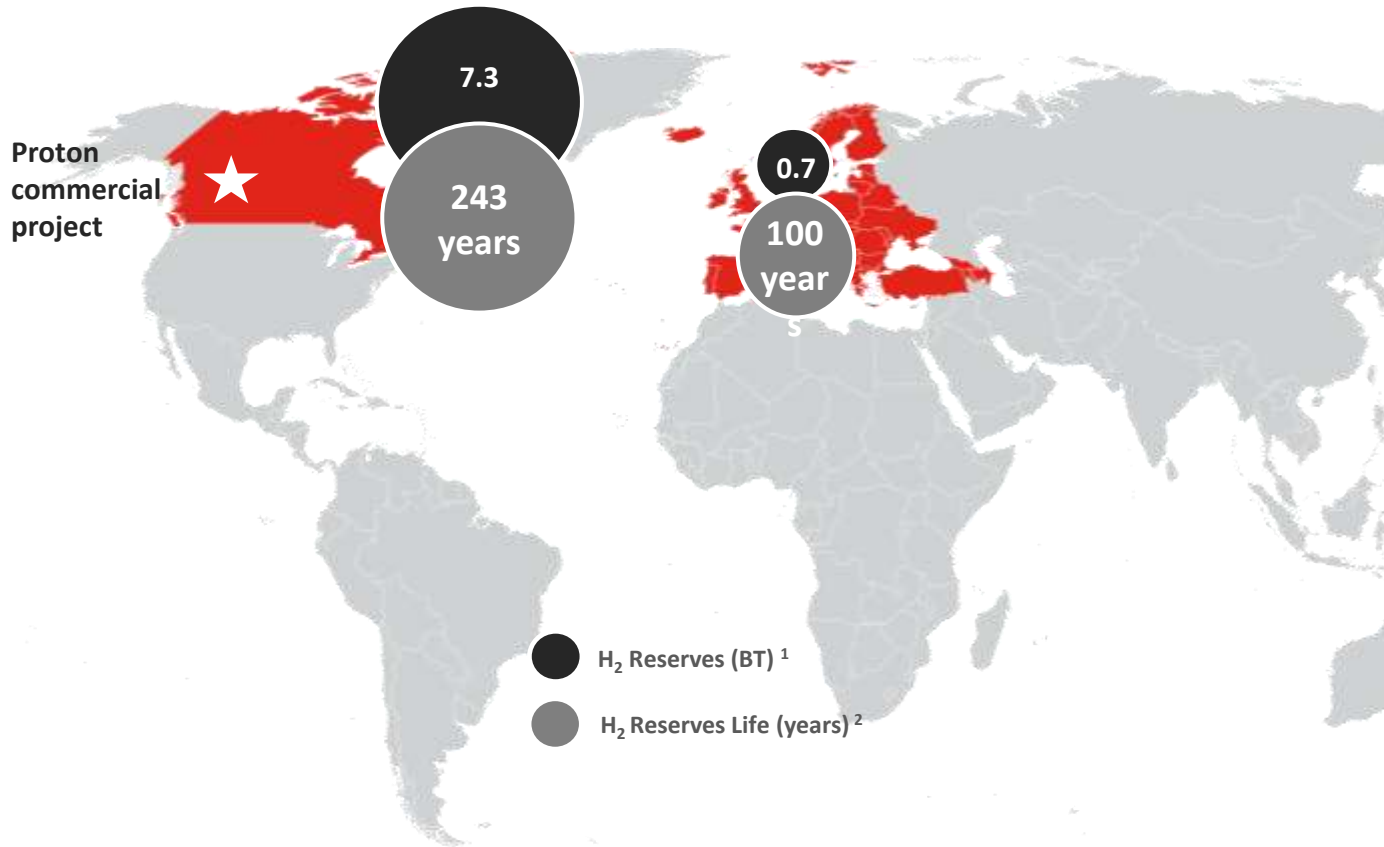
CLEAN, LOW-COST HYDROGEN.

September 2021

OUR MISSION

Prove the path to large scale commercial hydrogen
production from existing oil fields

COMPANY PROFILE

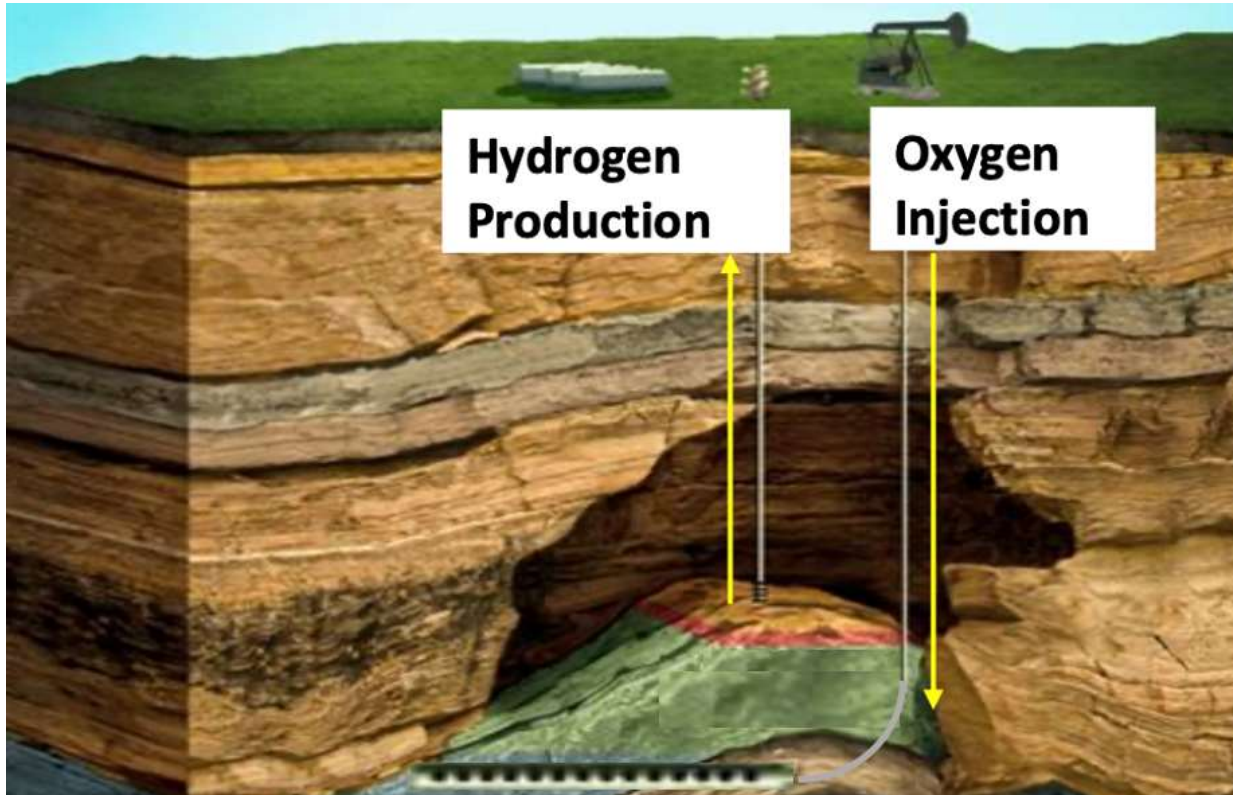


- Incorporated March 2016
- Revenue start : 2017
- F/T Employees: 21 office, 20 field
- Currently developing 1st project globally with large potential to grow at scale
- Very large opportunity to leverage resource base and existing infrastructure within the North Sea countries and Canada.

1. Calculation based on: Canada 171 billion and North Sea 20 billion proven oil reserves; risk factor not assessed in calculation
2. Based on 2020 H₂ consumption: Canada 3Mt, North Sea 7 Mt

PROTON'S TECHNOLOGY

The process uses minimal new infrastructure creating a very small footprint and results in zero negative emissions.



What color of H₂?

“Proton Clear” due to best-in-class CO₂ emissions

Step 1

Utilize existing oil & gas reserves & Infrastructure

Step 2

Inject oxygen into the reservoir

Step 3

Downhole chemical reactions oxidize residual oil and generate H₂

Step 4

Recover H₂ in-situ or at the surface with existing H₂ separation technologies, or designed filters

Step 5

Sequester CO₂, capture and transport H₂ leaving carbon emissions underground

PROTON'S COMPETITIVE ADVANTAGES

Best in class H₂ costs, CO₂ emissions, and overall energy efficiencies.

Hydrogen Production Method	Market Share (%)	Cost of Production (USD\$/kg)	CO ₂ Emissions (g CO ₂ /MJ)	Energy Efficiency (%)
Proton Technologies Canada Process	TBD	0.10-0.50	Negative to 0	78
Electrolysis – Wind Off-Grid	5	5.40	0	70-80
Electrolysis – Wind Grid Connected		3.78	16.4	
Steam Methane Reforming with CCS		1.56	22.4	60-80
Steam Methane Reforming with CO ₂ Emissions	95	0.98	89.1	

<https://www2.gov.bc.ca/assets/gov/government/ministries-organizations/zen-bcfn-hydrogen-study-final-v6.pdf>

THE PROJECT



Proton's 1st commercial project underway in Saskatchewan Canada

- Seeking expansion of another commercial project in European market

Project components include:

- Existing oil field
- Oxygen plant
- Surface separation & storage of hydrogen
- Transportation & sales

PROTON'S ASK

Bring innovative, low-cost hydrogen to the European market through strategic partnerships



- Potential licensees & joint ventures (energy operators)



- Customers



- Strategic investors

- Transformative technology
- First to market (patents filed in 110 countries)
- Rapidly scalable
- Global opportunity
- Retain local/global expertise
- Decarbonize the industry

CONTACT INFORMATION



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