NORTHLIGHT

POWERING CANADA'S NEXT FRONTIER

For generations,
the North has relied on
imported fuel.

While just below the surface
lies a natural energy resource.

NATURAL HYDROGEN EXPLORATION
AND INFRASTRUCTURE



The North runs on diesel.



Canada's North depends on one of the most complex fuel supply chains in the country. Every litre of diesel must be produced, transported, stored and delivered before it generates a single kilowatt of electricity.

That dependence creates a structural cost burden measured not only in dollars, but in logistics, working capital and infrastructure risk.

THE DIESEL JOURNEY TO THE NORTH

01 REFINERY



Diesel produced in southern refineries.

→

02 TRUCK



Hundreds to thousands of kilometres by winter road or highway.

→

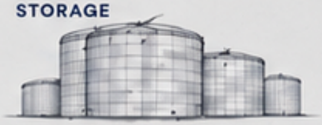
03 SEALIFT



Short seasonal window. Weather delays are routine.

→

04 STORAGE



Bulk storage required. High capital and contamination risk.

→

05 COMMUNITY



Delivered to remote communities for power, heat and critical services.

~292
REMOTE CANADIAN COMMUNITIES DEPEND ON DIESEL ALMOST EXCLUSIVELY (~185,000 PEOPLE)

75+
REMOTE NORTHERN COMMUNITIES ACROSS THE TERRITORIES

682M L
OF DIESEL CONSUMED ANNUALLY
~$1.5B ESTIMATED ANNUAL SPEND

6–10×
THE CANADIAN AVERAGE FOR ENERGY
~$1.30/kWh IN SOME COMMUNITIES

$300–400M
PER YEAR IN GOVERNMENT SUBSIDIES JUST TO KEEP THIS RUNNING

NUNAVUT
40,000 RESIDENTS / 25 COMMUNITIES
100% DIESEL-DEPENDENT
~2/3 OF GENERATORS AT OR BEYOND MECHANICAL END-OF-LIFE

Decades of exploration data, *searching for the wrong molecule.*

From the 1970s to the 1990s, hundreds of wells and thousands of kilometres of seismic data were collected across the Mackenzie Delta — all in search of oil and gas.

None of it was ever analyzed for hydrogen.

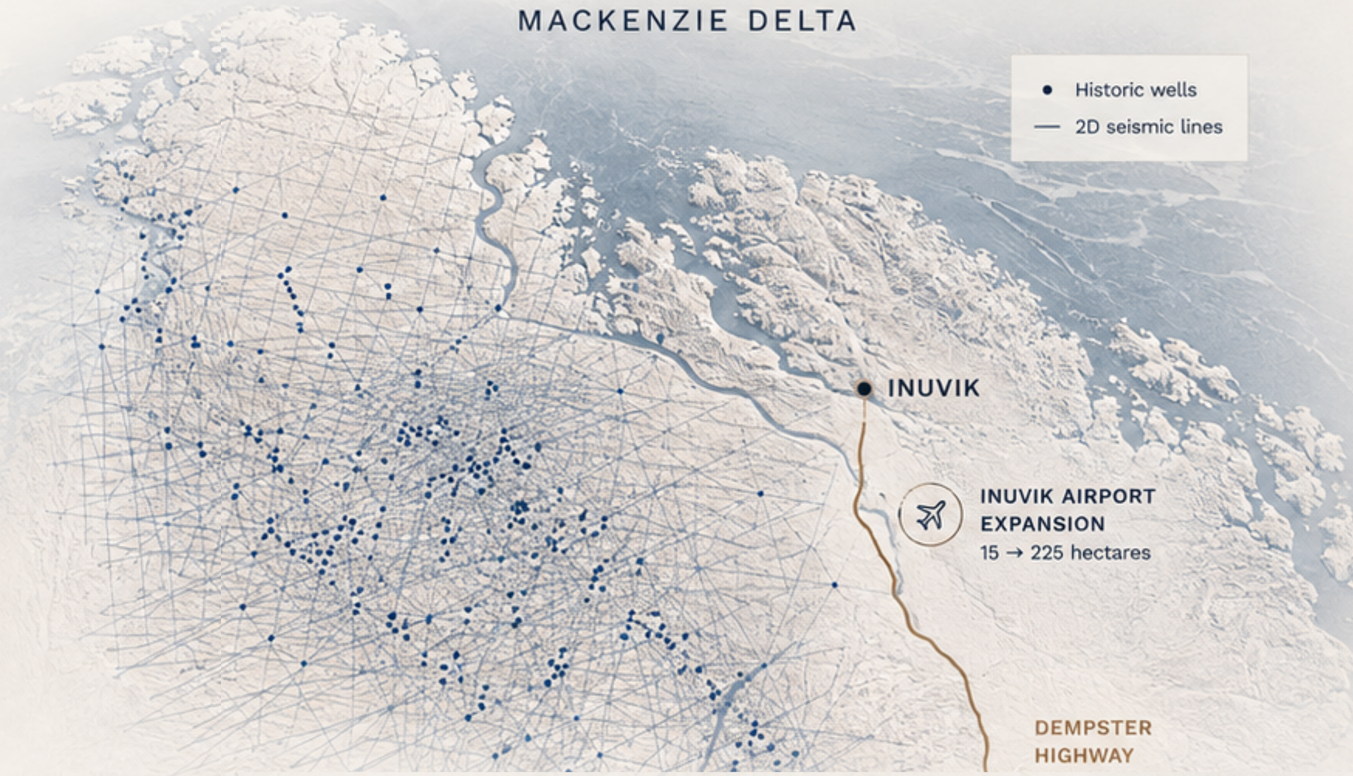
The value may not only be in the resource. It may also be in the decades of geological information already available to help find it.

STRATEGIC LOCATION
Inuvik sits at the intersection of transportation, defense and community infrastructure.

DEFENSE INVESTMENT
Inuvik Airport expansion from 15 to 225 hectares to support future operations.

TRANSPORTATION ACCESS
Connected to the Dempster Highway — Canada's only all-season route to the Arctic.

COMMUNITY INFRASTRUCTURE
Energy development can build on existing services and deliver long-term local value.



FEDERAL INVESTMENT CONTEXT

$230M
RUNWAY EXTENSION
Strengthening Inuvik Airport for defense and commercial use.

$100M
CIB INVESTMENT
Inuvialuit Settlement Region gas wells and infrastructure.

60MW
TALTSON HYDRO EXPANSION
Powering 11 communities across the North.

STAGE	TRADITIONAL EXPLORATION	NORTHLIGHT APPROACH
DATA	New seismic surveys and well programs	Leverage decades of wells and thousands of km of seismic data
TARGETING	Regional to prospect scale	Play-scale targeting using existing information
EXPLORATION	High-risk drilling to find shows	De-risked targeting, test higher probability zones
CAPITAL EFFICIENCY	High burn, long lead times	Lower burn, shorter cycle times
PATH TO VALUE	Many years, high geological risk	Faster to insight, lower geological risk

PROOF THIS APPROACH WORKS

In January 2026, MAX Power announced the Lawson discovery in British Columbia — Canada's first confirmed subsurface natural hydrogen system.

- 168,000 – 286,000 ppm hydrogen in core samples
- 475 km Genesis Trend
- Validated by Dr. Yaoguo Li
- Backed by Eric Sprott



LOWER CAPITAL INTENSITY
No greenfield infrastructure build.

EXISTING INFRASTRUCTURE
Leverage what's already in place.

NEAR-TERM REVENUE
Paid consulting in Phase 1.

LOCAL, RELIABLE ENERGY
Lower cost, lower emissions.

The future of energy is already beneath *our feet.*

Natural hydrogen has been generating in Canadian Shield rock for millions of years. What changed is that it can now be measured, targeted, and extracted. NorthLight begins in the communities that need it the most.



NORTHLIGHT POWER

Measured discharging from Canadian Shield rock for over a decade — not modeled, not inferred.

Advised by the geologist who confirmed the world's first commercial natural hydrogen discovery.

Positioned in the two regions named highest-priority by the 2026 PNAS study.

A geologically long-term resource with potential to support sustained production.

WHY IT MATTERS

Confirmed.
Measured on Earth's oldest rock.

A new resource.
Hydrogen, naturally produced.

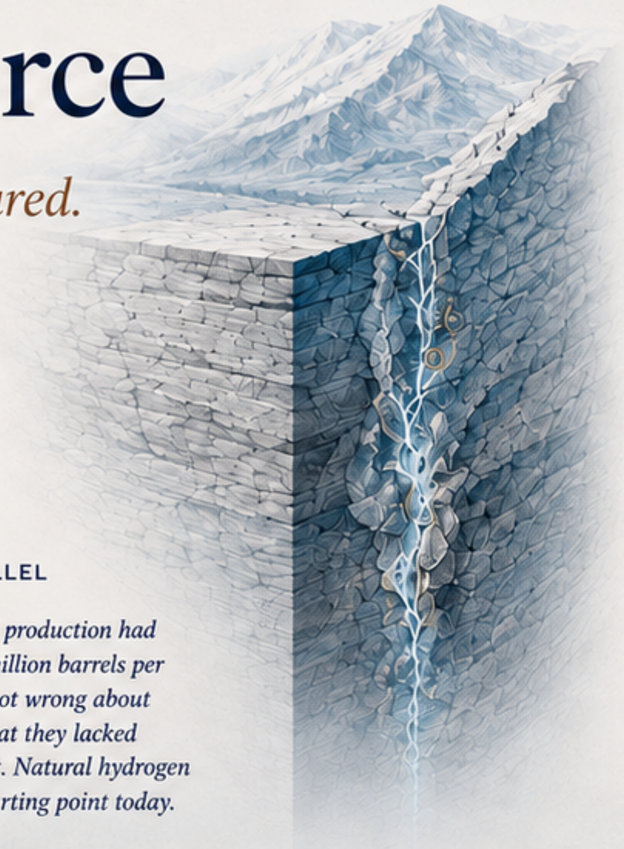
Unique to the North.
One of the world's best basins.

A legacy of data.
Decades of exploration to build on.

A cleaner future.
Domestic energy for generations.

The next energy resource

Natural hydrogen isn't manufactured. It's discovered.



Naturally occurring hydrogen is generated within the Earth's crust through ongoing geological processes. It is not made in a plant or derived from fossil fuels. It exists, migrates and accumulates in nature—now emerging as a major new exploration frontier.

HOW IT FORMS

Hydrogen is produced deep in the Earth through two natural processes:

SERPENTINIZATION
Water reacts with iron-rich rocks, releasing hydrogen.

RADIOLYSIS
Natural radioactive decay splits water molecules, producing hydrogen.

THE SHALE PARALLEL

In 2008, U.S. crude oil production had fallen to roughly five million barrels per day. Geologists were not wrong about where the oil was. What they lacked was a way to get it out. Natural hydrogen is at the equivalent starting point today.

THE EMERGENCE OF A NEW RESOURCE CATEGORY

1987 — BOURAKÉBOUGOU DISCOVERY
Natural hydrogen encountered in Mali during a water well drilling program.

2012 — FIRST COMMERCIAL PRODUCTION
The Bourakébougou field re-opened and began producing electricity using naturally occurring hydrogen for a nearby village. Continuous production has been maintained since 2012 at ~97–98% pure hydrogen.

2014 — SCIENTIFIC VALIDATION
Peer-reviewed research establishes natural hydrogen as a legitimate geological exploration target rather than an isolated anomaly.

2024 — A GLOBAL RESOURCE
The U.S. Geological Survey estimates ~5.6 trillion metric tonnes of naturally occurring hydrogen in-place worldwide. Even 2% recovery would exceed all proven natural gas reserves on Earth.

2025 — EXPLORATION ACCELERATES
Governments, researchers and public companies begin advancing dedicated natural hydrogen exploration programs across North America, Europe and Australia.

2025–26 — CANADIAN EXPLORATION ACCELERATES
Momentum builds as new data, partnerships and field programs advance across Canada's geologic basins.

THE SCALE OF THE OPPORTUNITY

~5.6 TRILLION
METRIC TONNES IN-PLACE GLOBALLY
U.S. GEOLOGICAL SURVEY ESTIMATE (2024)

2%
RECOVERY POTENTIAL COULD EXCEED ALL PROVEN NATURAL GAS RESERVES ON EARTH

WHY IT MATTERS

The Earth has been generating hydrogen for millions of years.

Some evidence suggests naturally occurring hydrogen systems may continue to recharge over time, though the extent and mechanisms remain an active area of research.



BOURAKÉBOUGOU FIELD, MALI
THE WORLD'S ONLY NATURAL HYDROGEN FIELD IN COMMERCIAL PRODUCTION

PROOF POINTS

- INDEPENDENT SCIENTIFIC RESEARCH
- COMMERCIAL PRODUCTION SINCE 2012
- USGS RESOURCE ASSESSMENT
- GLOBAL EXPLORATION ACCELERATING