

AYRTON ENERGY

HYDROGEN . SIMPLIFIED .

Making hydrogen as practical and accessible as diesel, for a decarbonized world.

Ayrton Energy is a Canadian clean energy company commercializing **e-LOHC™** - an electrically enabled liquid organic hydrogen carrier system that makes hydrogen storage and transport practical, safe, and infrastructure-compatible at industrial scale.

THE TECHNOLOGY

e-LOHC™ — A New Paradigm for Hydrogen Carriers

e-LOHC™ stores and releases hydrogen at **low temperature (<100°C)** for both **hydrogenation and dehydrogenation** using an electrically driven process — eliminating the high-temperature requirements of conventional thermal LOHC systems. The result: lower energy losses, compatibility with existing liquid fuel infrastructure, and a hydrogen carrier deployable without new capital-intensive infrastructure.

⚡ Electrically Enabled

Electrochemical hydrogenation and dehydrogenation at low temperature, no external heat source required, enabling renewable-powered operation.

🏗️ Infrastructure Compatible

Liquid at standard conditions, stored and transported using existing tanks, pipelines, and liquid fuel logistics networks.

🌐 Scalable & Modular

From 20 kg/day pilot systems to tonne-per-day commercial deployments, scalable for industrial, utility, and remote applications.

COMPETITIVE POSITIONING

Carrier Technology	e-LOHC™ (Ayrton)	Thermal LOHC (MCH/DBT)	Liquid H ₂	Ammonia
Operating Temperature	✓ <100°C both directions	× 300–500°C dehydrogenation	× -253°C	× High temp cracking
Existing Infrastructure	✓ Compatible	~ Partial	× Requires new build	× Requires new build
Toxicity / Safety Risk	✓ Low	✓ Low	× Cryogenic hazard	× High toxicity
Renewable-Powered Release	✓ Yes (electric)	× Requires heat source	N/A	× Requires heat source

TRACTION & MILESTONES

- 22-person team - engineering, operations, BD
- 3 signed pilot agreements - partners in North America and Japan
- First field pilot deploying H₂ 2026 - 20 kg/day system
- \$6.8M USD seed raised in 2024 - backing chemistry, IP, and team build-out
- Series A launching September 2026
- Singapore Liveability Challenge winner - 2025
- Foresight Canada Cleantech Venture of the Year - 2025

TARGET MARKETS & APPLICATIONS

- Heavy industry - decarbonization of industrial processes
- Energy utilities - hydrogen storage and grid balancing
- International supply chains - Canada-to-Asia hydrogen export
- Remote communities - off-grid energy security
- Mining & resources - remote industrial sites, diesel displacement
- Ports, marine & transport - bunkering, refuelling corridors, fleet operators

PARTNERSHIP & INVESTMENT OPPORTUNITY

Ayrton is seeking **strategic partners and investors** for our Series A (launching September 2026) to scale to tonne-per-day commercial deployments. We are particularly interested in partners with hydrogen infrastructure, industrial decarbonization, or energy supply chain expertise and who see Japan and Asia as key hydrogen import markets. We have an existing signed pilot relationship with a leading Japanese construction firm, demonstrating our commitment to the Japanese market.

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PILOT AGREEMENTS

22

TEAM MEMBERS

2026

FIRST FIELD PILOT

Sep '26

SERIES A LAUNCH

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