CORPORATE PROFILE 2026

Transforming Energy. Creating Value.

A Canadian Climate Technology Company deploying patented solutions across hydrogen, clean fuels, critical minerals, and waste valorization.

CANADA–JAPAN TRADE MISSION · JUNE 2026

Supported by Global Affairs Canada & Canadian Embassy Tokyo

AT A GLANCE

2015
Year Incorporated
10+ years of R&D prior

6
Patented Technology Platforms

5
Countries with Active Operations

26+
Core Team Members incl. 15 R&D Scientists

CORE TECHNOLOGY DOMAINS

- Blue Hydrogen
- Blue Methanol
- REE from Red Mud
- Cold Plasma H_2
- CO_2 Capture & Utilization
- Waste-to-Energy
- Modular WWTP
- SOFC Integration

Who We Are

COMPANY OVERVIEW

01

Climate Technology EPC Firm — Incorporated 2015, Canada

Engineering, Procurement & Construction company deploying next-generation clean energy technologies. Over 10 years of pre-commercial R&D prior to incorporation.

02

Proprietary US-Patented Technologies

Six core technology platforms developed with leading scientists from Canada, Germany, and Israel. IP includes matrix reactors, cold plasma hydrogen, and the world's only REE extraction from red mud.

03

Government-Endorsed International Presence

Selected participant in four government-organized trade missions: Italy, Mexico, India, and Japan (2026). Endorsed by Global Affairs Canada, Canadian Embassy Tokyo, and Trade Commissioner Service.

04

Proven Industrial Partnerships

Active engagements with Reliance New Energy (India), Tata Power (India), NALCO, and major energy companies in USA, Indonesia, Italy and Mexico. Seeking MoU-level partnerships in Japan.

Global Presence & Team

ACTIVE OFFICES & OPERATIONS

CANADA **HQ**	**Toronto, Ontario — Headquarters**	Corporate leadership · Business development · Trade missions · IP management
GERMANY **15**	**Frankfurt — R&D Hub (EU Operations)**	15 scientists, engineers & academics · Core technology development · Multi-national EU coverage
USA **4**	**United States — Business Development**	North American market development · Project partnerships · Investor relations
INDIA **5**	**India — South Asia Operations**	Reliance New Energy · Tata Power · NALCO engagements · PDA Trade Mission participant
AUSTRALIA **2**	**Australia — Pacific Operations**	Asia-Pacific market development · Mining sector partnerships · REE supply chain

TEAM COMPOSITION

26+

Core Team Members

R&D Scientists (Germany)	15
India Operations	5
USA Team	4
Australia	2
Canada HQ	Core

TRADE MISSION COUNTRIES

IT Italy · MX Mexico · IN India · JP Japan · KR Korea · ID Indonesia

Leadership & Scientific Team

EXECUTIVE & TECHNICAL LEADERSHIP

Vandit Verma
CEO & FOUNDER

Drives Enervoxa's strategic vision, global partnerships, and international expansion. Leads government-backed trade missions across Asia, Europe, and the Americas. Focuses on commercializing disruptive climate technologies and securing strategic MoUs with global industrial conglomerates.

Igor Kuntzevitsky
CHIEF TECHNOLOGY OFFICER

Inventor of the world's only patented commercial-scale REE extraction process from bauxite tailings (red mud). Leads engineering, IP development, and technology integration across Enervoxa's six core platforms. Expert in complex chemical processing and resource recovery.

Aleksey Nikitin
LEAD SCIENTIST

Renowned scientist with background from the prestigious Semenov Institute. Foremost expert in matrix conversion technologies and partial oxidation (POX/ATR) reactors. Leads the development of Enervoxa's Blue Hydrogen and Blue Methanol production platforms.

Dan Cesana
PARTNER

Holds 1/3 ownership in Enervoxa. Concurrently serves as CEO of Hardrock Forming, a major concrete forming company with 1,000+ employees. Brings unparalleled EPC (Engineering, Procurement, and Construction) expertise and massive execution capability for large-scale infrastructure projects.

15

Frankfurt R&D Hub — Engineering Excellence

Supported by a dedicated team of 15 top scientists, academics, and engineers in Germany, driving continuous innovation and patent development across all technology platforms.

Our Technology Platform

INTEGRATED ECOSYSTEM

Six Patented Platforms. One Integrated Mission.

Enervoxa's portfolio spans hydrogen production, critical minerals extraction, waste valorization, and advanced water treatment.

Engineered for modularity, rapid deployment, and maximum resource recovery, our technologies transform industrial liabilities into high-value assets.

ACCEPTS ANY GAS COMPOSITION

1. Matrix Reactor (POX/ATR)

Non-catalytic partial oxidation converting flare gas, natural gas, or biogas into Blue Methanol and Hydrogen. Features full CO_2 capture and modular 40-ft container deployment.

WORLD'S ONLY COMMERCIAL PROCESS

3. Red Mud REE Extraction

Patented technology extracting 17 Rare Earth Elements (Sc, Nd, Dy) and Iron Oxide (Fe_2O_3) directly from toxic bauxite tailings, enabling green steel and battery supply chains.

CONTAINERIZED RAPID DEPLOYMENT

5. Modular WWTP & Desalination

Advanced hydraulic wave purification and sewage sludge treatment, producing clean water, organic fertilizers, and eco-fuel pellets for industrial and municipal use.

32 KWH/KG H_2 + HPA CO-PRODUCT

2. Cold Plasma Reactor (EcoAlloy™)

Ultra-efficient hydrogen production from water using 27,000V plasma. Co-produces High Purity Alumina (HPA) worth $800–$20,000/kg for semiconductor markets.

100% WASTE-TO-VALUE CONVERSION

4. Zero-Emission Pyrolysis

Modular units converting municipal solid waste, plastics, and biomass into electricity, biofuels, and synthetic gases with zero atmospheric emissions.

CO_2 TO ADVANCED SOLID MATERIALS

6. Carbon Capture & Utilization

Transforms captured industrial CO_2 into high-value polymers and nanocarbon tubes, integrating seamlessly with our Matrix Reactors for near-zero emission production.

CATALYST-FREE GAS CONVERSION

Transforming any hydrocarbon gas into high-value clean fuels with near-zero emissions.

Omnivorous Feedstock

Accepts Natural Gas, Flare Gas, APG, H_2S, and Ethane without extensive pre-treatment. Eliminates gas flaring by turning waste gas into profitable outputs.

High-Value Outputs

Produces Blue Methanol, Blue Hydrogen, DME, Jet Fuel, and Ethylene via highly efficient, non-catalytic syngas generation.

Full CO_2 Capture & Utilization

Utilizes up to 90% CO_2 directly in the conversion process. The remainder is converted into solid carbon materials such as nanotubes and polymers.

Rapid Modular Scaling

Compact 40-ft containerized units enable low-footprint deployment. Rapid scalability allows new plants to come online every two weeks.

Strategic Application: Data Centre Baseload Power

Direct integration with Solid Oxide Fuel Cells (SOFC) provides continuous, clean, and reliable baseload power for hyperscale data centres and industrial campuses, bypassing grid constraints.

US PATENTED TECHNOLOGY

Next-Generation Hydrogen Production via 27,000V Plasma

The EcoAlloy™ reactor utilizes a high-voltage cold plasma field with an aluminum interelectrode and polymer microspheres to split water molecules. This thermodynamic breakthrough bypasses the energy limitations of conventional electrolysis.

32 kWh/kg

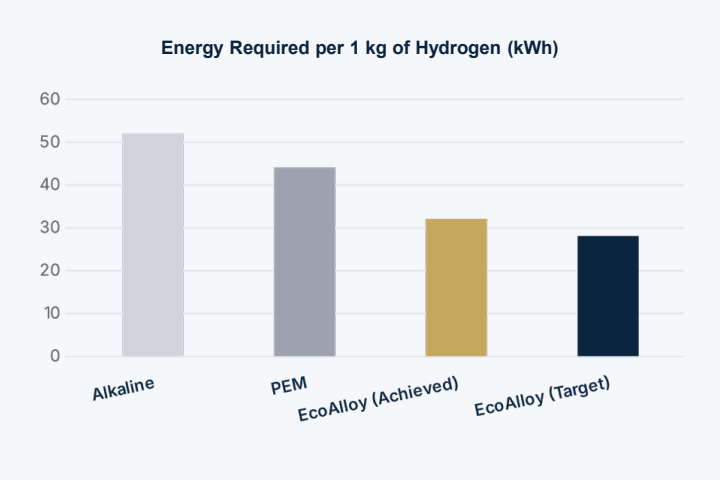
Energy Consumption

Achieved in 360-hour continuous run. Target: Sub-30 kWh/kg.

7 kg

Water Usage

Per 1 kg of H_2 produced. Highly efficient water utilization.



THE ECONOMIC DIFFERENTIATOR

High Purity Alumina (HPA) Co-Product

The plasma process produces 5N/6N High Purity Alumina (Al_2O_3) alongside hydrogen. This dual-revenue model fundamentally transforms the economics of green hydrogen.

$800 - $20k
Market Value per kg

$3.7B
Global HPA Market

16%
Annual CAGR

INTELLECTUAL PROPERTY

US Patented Technology

Invented by Igor Kuntzevitsky (CTO) / Enervoxa

The World's Only Commercial-Scale REE Extraction from Bauxite Tailings

Enervoxa has developed and patented a groundbreaking process to extract high-value Rare Earth Elements (REEs) and critical minerals directly from red mud (bauxite tailings), transforming a massive environmental liability into a strategic resource.

PRIMARY RECOVERY

17 Rare Earth Elements

High-yield recovery of critical magnet and tech metals including Scandium, Neodymium, Dysprosium, Yttrium, Lanthanum, and Cerium.

SECONDARY RECOVERY

Iron Oxide (Fe_2O_3)

Recovers high-purity iron oxide, providing a direct, sustainable feedstock for Green Steel production and Iron-Air battery manufacturing.

ENVIRONMENTAL IMPACT

Zero-Waste Remediation

Remediates toxic red mud stockpiles, eliminating storage costs and environmental risks for refineries.

ECONOMIC PROFILE

Higher Profitability

The value of extracted REEs and critical minerals generates significantly higher profitability than the original alumina production.

WASTE VALORIZATION & CIRCULAR ECONOMY

Transforming Industrial & Municipal Liabilities into High-Value Assets

100% WASTE-TO-VALUE CONVERSION

Platform 4 — Zero-Emission Pyrolysis

Converts any biomass, municipal solid waste (MSW), or plastic waste into electricity, biofuels, and synthetic gases. Operates with zero atmospheric emissions, providing a true circular economy solution for industrial and municipal waste management.

CONTAINERIZED RAPID DEPLOYMENT

Platform 5 — Modular WWTP & Desalination

Advanced hydraulic wave purification systems deployed in modular 40-ft containers. Treats complex industrial wastewater and converts sewage sludge into high-value organic fertilizers and eco-fuel pellets, eliminating disposal costs.

CO_2 TO ADVANCED SOLID MATERIALS

Platform 6 — Carbon Capture & Utilization (CCU)

Seamlessly integrates with the Matrix Reactor to capture CO_2 and transform it into advanced solid materials, including high-value polymers and nanocarbon tubes, ensuring near-zero emission industrial processes.

Government-Backed Trade Mission Credentials

INSTITUTIONAL SUPPORT & ENDORSEMENT

Global Affairs Canada | **Trade Commissioner Service (TCS)** | **Canadian Embassy, Tokyo** | **PwC Korea (GAC Mandate)**

2026 GLOBAL TRADE MISSIONS

Italy

OCTOBER 2026

Climate Tech & Infrastructure

Targeting joint ventures and projects with major Italian energy and industrial firms. Focus on hydrogen, CCUS, and alignment with Italy's National Recovery and Resilience Plan (PNRR).

Mexico

2026

Clean Tech & Decarbonization

Team Canada Trade Mission focusing on B2B engagements with Mexican industrial leaders and financial partners. Emphasizing blue methanol, BESS pipelines, and industrial decarbonization.

India

APRIL 2026 (PDA)

Clean Energy & Critical Minerals

Selected for the PDA mission. High-level engagements with India's largest conglomerates to deploy matrix reactors, cold plasma hydrogen, and red mud REE extraction technologies.

Japan

JUNE 2026

Strategic Partnerships & MoUs

Targeting signed MoUs with Japanese trading houses and conglomerates. Focus on REE supply chains, methanol offtake, and SOFC data centre integration.

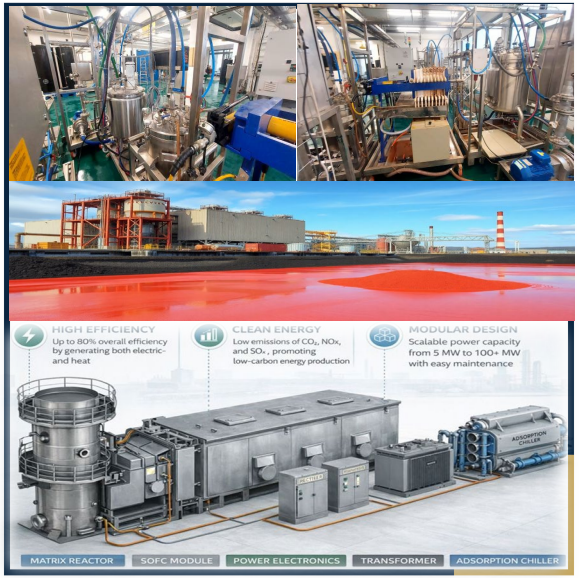
Key Industrial Partnerships

ACTIVE ENGAGEMENTS

NALCO / BORNEO MIND.ID Red Mud REE Extraction

Reliance New Energy
Hydrogen & Energy Storage

Tata Power & Tata Steel
Green Steel & Baseload Power



A DEFENSIBLE MOAT

Proprietary US Patents

Enervoxa's technology stack is protected by a robust portfolio of US and international patents, developed over a decade of rigorous R&D by our global scientific team.

Four structural advantages that redefine the economics of the energy transition.

01. CRITICAL MINERALS

Exclusive Red Mud Process

The only company globally capable of extracting Rare Earth Elements (REEs) and Iron Oxide from bauxite tailings at commercial scale, creating a new, highly profitable supply chain.

02. HYDROGEN ECONOMICS

32 kWh/kg Efficiency

Our Cold Plasma reactor achieves 32 kWh/kg H_2 (vs. 50 kWh industry standard) while co-producing high-value High Purity Alumina (HPA), fundamentally altering hydrogen unit economics.

03. FEEDSTOCK FLEXIBILITY

Omnivorous Matrix Reactor

Unlike traditional systems, our non-catalytic Matrix Reactor accepts ANY hydrocarbon gas composition (flare gas, biogas, natural gas) without requiring expensive pre-treatment.

04. DECARBONIZATION

Integrated CO_2 Capture

Carbon capture is not an add-on; it is fully integrated into our processes. We utilize captured CO_2 directly in methanol synthesis or convert it into advanced solid materials.

MISSION OBJECTIVE

Strategic Alignment in Japan

Enervoxa is seeking to establish formal partnerships with Japanese industrial conglomerates, trading houses, and energy firms. Our primary objective for the June 2026 Trade Mission is to execute **Memorandums of Understanding (MoUs)** to formalize these strategic alliances.

COLLABORATION STRUCTURES

01
Technology Licensing

Deploy Enervoxa IP in Japan & Asia

Exclusive or non-exclusive licensing agreements allowing Japanese partners to utilize Enervoxa's patented technologies (Matrix Reactor, Cold Plasma, Red Mud REE) within specific geographic territories or industrial applications.

02
Joint Venture

Co-Develop Commercial Projects

Formation of Special Purpose Vehicles (SPVs) to co-develop, finance, and operate large-scale infrastructure projects. Examples include Blue Methanol production plants, regional Hydrogen hubs, or commercial REE extraction facilities.

03
Strategic Alliance

Offtake, R&D, or Equity Investment

Comprehensive partnerships encompassing long-term offtake agreements for clean fuels/minerals, collaborative R&D initiatives to adapt technologies for the Japanese market, or strategic equity investments at the corporate level.

Contact & Next Steps

We invite Japanese industrial and financial partners to schedule B2B meetings during the upcoming Trade Mission.

Vandit Verma

CEO & CO-FOUNDER

info@enervoxa.com

www.enervoxa.com

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