50

FORESIGHT 50

CANADA'S MOST INVESTIBLE CLEANTECH 2026



Canadian innovators are transforming how we live, work, move, harvest, build, produce, manufacture—**thrive.**

TABLE OF CONTENTS

Good for the Planet, Great for Business 3

A Message from Our Interim CEO 5

Investing in Tomorrow: About Foresight 50 7

Food and Water 9

Infrastructure 23

Natural Resources 69

A Message from a Foresight 50 Judge 115

Meet the 2026 Judges 117

Metrics that Matter 125

Acknowledgements 126

GOOD FOR **THE PLANET.** GREAT FOR **BUSINESS.**

For over a decade, Foresight Canada has built a thriving national cleantech ecosystem designed to strengthen our economic future.

From coast to coast, our team bridges critical gaps—ensuring Canada's top innovators and the foundational industries that need them most receive the targeted support, strategic connections, and expert mentorship required to scale and optimize their operations.

We believe that true commercial transformation doesn't happen in isolation; it requires a strong network working together to solve our greatest industrial and environmental challenges.

To date, we have supported over 1,780 ventures, 110 industry partners, and 500 investor firms to deploy more than $2.54 billion in capital, achieve over $648.9 million in revenues, and create 10,480 high-paying jobs.

By uniting homegrown ingenuity with market demand, we're turning environmental imperatives into our greatest economic advantage and positioning Canada to lead on the global stage.

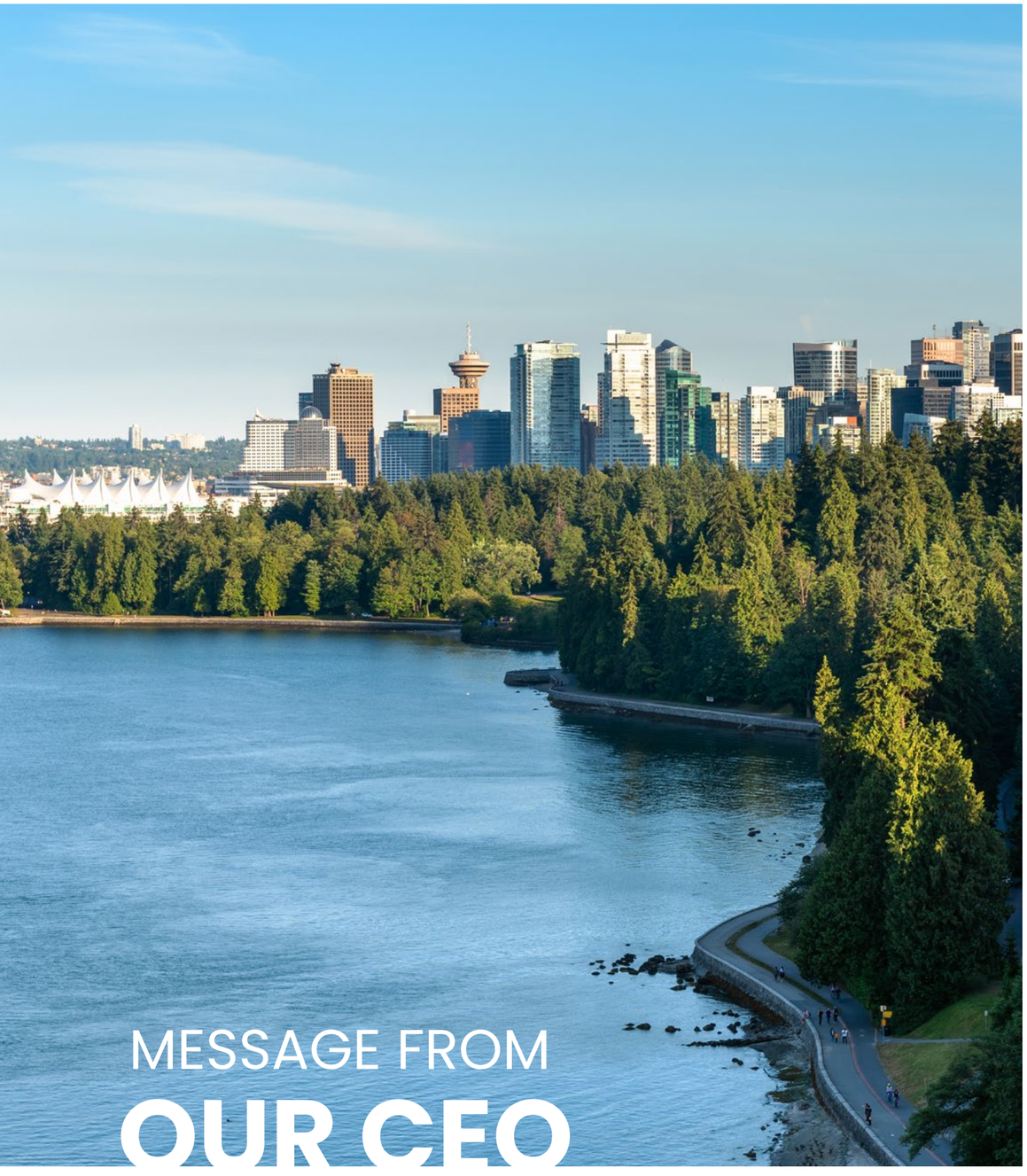
The 2026 Foresight 50 Honourees represent this transformation—Canada's leading cleantech innovators across our country's core economic sectors: food and water, infrastructure, and natural resources. Behind each of these technologies is a team of visionary founders, researchers, and builders who envision a more resilient future and work tirelessly every day to bring it to life.

They are over 613 full-time employees doing the hard work of turning breakthrough ideas into commercial realities. We owe them not only our gratitude and support, but our commitment to partner with them, invest in their vision, and champion their growth.

Investing in the Foresight 50 is a direct investment in the resilience, adoption, and future-proofing of every major sector in the Canadian economy.

Learn more about how we are accelerating the adoption of the world's best clean technologies at foresightcac.com.





MESSAGE FROM **OUR CEO**

CANADA IS AT A **TURNING POINT.**

The innovators scaling today will define our economy tomorrow. The companies adopting sustainable technologies now are the ones that will lead in the future.

Navigating this shift isn't easy. Is it uncomfortable? Yes. Disruptive? Absolutely. But is it necessary? Without a doubt.

Every day, I see investors and corporate leaders waking up to the reality that clean technology isn't just about compliance—it's about long-term survival. These technologies are practical investments that make Canadian businesses stronger, more competitive, and better equipped for what lies ahead.

We have a choice: we can wait and react to global changes, or we can lead them with optimism. Canada's clean transition won't happen on its own; it takes visionaries to imagine the future, leaders to build it, and catalysts to fund it.

That is why the Foresight 50 matters. This annual program shows what scalable solutions and smart investments look like in action—proving that protecting the environment and growing a resilient economy go hand in hand.

For the sixth year, I am thrilled to showcase Canada's 50 most investible cleantech ventures, bringing these groundbreaking technologies and the brilliant teams behind them to the forefront of the global investor and adopter community.

To this year's honourees: congratulations! Your determination and resilience reflect the true strength of Canadian ingenuity. And to our investor and industry partners: these companies are ready to scale.

By backing these ventures, you aren't just funding businesses, you are investing in our shared future.

HEATHER CROCHETIERE
Interim CEO
Foresight Canada



INVESTING IN **TOMORROW.**

ABOUT FORESIGHT 50

Since 2021, the Foresight 50 has bridged the gap between Canada's most promising cleantech ventures and the global capital needed to scale them.

Selected from over 150 applicants by an independent panel of top climate investors, these high-growth companies are recognized for turning real-world environmental challenges into economic opportunities based on their commercial traction, strong leadership, and proven impact.

More than just an award, the program connects the most promising Canadian innovation with global capital, proving that clean technology is a practical driver of long-term profitability and industrial strength.

The honourees featured in these pages are the frontrunners of a prosperous Canadian economy, driving true transformation. Spanning precision agriculture, advanced water tech, clean energy, circular resource recovery, and other sectors, they represent the frontline of Canada's industrial evolution.

These companies are not just building technologies—they are building resilient, scalable businesses. To date, past honourees have collectively raised over $3.2 billion to scale their operations globally.
By solving operational challenges and modernizing supply chains, these featured leaders are protecting our vital natural assets and securing Canada's position as a global leader in the clean economy.



The 2026 Foresight 50 Showcase is presented by Foresight Canada and powered by Innovate BC with support from Fasken; Latitude Cleantech Search; Osler, Hoskin & Harcourt LLP; RBCx; Richards Buell Sutton LLP; Verdex Capital; and ZEIC; and Sustainability Partner Bullfrog Power.

Foresight would also like to thank the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP), for providing funding support for its Cleantech Ventures program.

The publishing of this book was powered by Innovate BC.



FOOD & WATER

PROTECTING OUR **VITAL RESOURCES**

Food and water security are foundational to Canada's economic resilience. Yet, trade disruptions, climate impacts, and aging infrastructure are putting unprecedented pressure on these critical supply chains.

Addressing these vulnerabilities requires a rapid shift from risk to innovation.

The technologies featured in this section are transforming our food systems, modernizing our water infrastructure, and protecting Canada's vital oceans, rivers, and lakes—safeguarding our most critical natural assets while strengthening our resilience.

FOOD SECURITY

Breakthroughs in precision agriculture, smart food production, and supply chain logistics designed to climate-proof Canada's food systems, enhance yield efficiency, and drive long-term productivity.

WATER SECURITY

Next-generation water management, treatment and leak-detection systems that optimize operating efficiency, eliminate energy waste, and turn wastewater into valuable resources.

HARNESSING “ALGAE FORESTS”

TURNING WASTEWATER POLLUTION INTO HIGH-VALUE BIOMASS

*“Installing an Algae Forest is a **cost-effective** option to meet compliance targets and reduce emissions.”*

SOLUTION DESCRIPTION

AlgaFilm Technologies produces a low-energy, biofilm-based wastewater treatment system that converts harmful nutrient pollution into high-value microalgae biomass.

Municipal and industrial facilities face tightening regulatory limits on nitrogen and phosphorus discharges that drive eutrophication. However, conventional treatment upgrades remain capital-intensive, energy-heavy, and dependent on chemical additives. AlgaFilm’s proprietary “Algae Forest” system solves this by using controlled microalgae to extract nutrients directly from wastewater, upcycling them into biomass for biofertilizers, biofuels, and biogas. Operating with up to 80% lower energy demand and 50% to 90% lower lifetime costs, AlgaFilm gives operators a cost-effective path to compliance.

Preventing nutrient runoff stops harmful algal blooms, protects aquatic ecosystems, and safeguards municipal drinking water. AlgaFilm cuts greenhouse gas emissions by 1.23 kg per 1,000 gallons of treated wastewater compared to legacy methods by capturing atmospheric CO_2 through photosynthesis, lowering power requirements, and eliminating chemical inputs like methanol and ferric chloride. This preserves local water security in vulnerable rural communities while creating skilled regional jobs.

AlgaFilm turns municipal wastewater plants into circular biorefineries that generate renewable feedstocks. By decentralizing advanced water treatment, the company enables smaller communities to modernize infrastructure without financial strain, establishing a scalable model for resource-recovering water management.

FOUNDED BY

PIERRE CÔTÉ,
AHREN BRITTON,
ROBERT BERES,
STEVEN PEDERSEN,
ROCCO MAZZAFERRO

abritton@algafilm.com

HQ: Ancaster, ON

algafilm.com

IMPACT

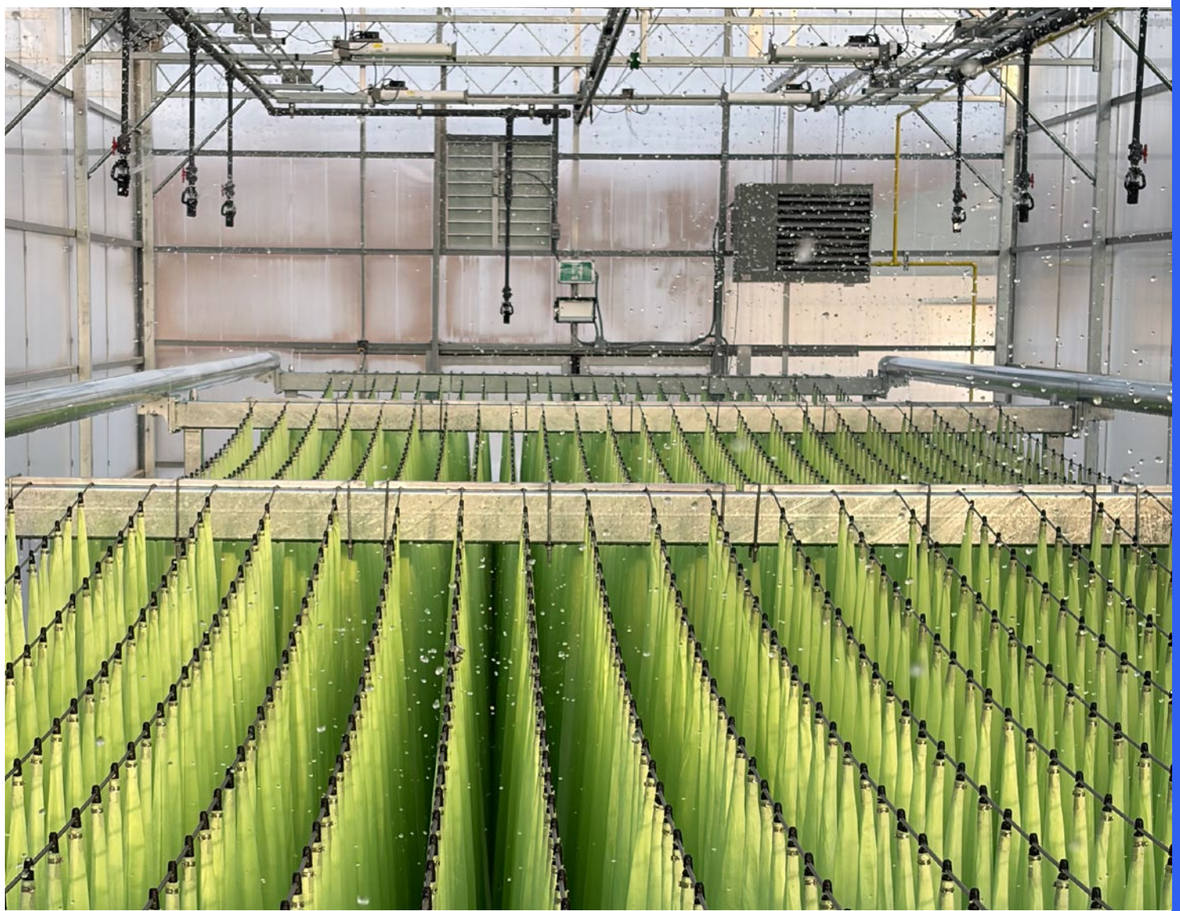
Environmental & Productivity Potential

1.84M gal

municipal wastewater nutrients removed in 2026

1.23 kg

GHGs reduced per 1,000 gallons of treated wastewater



H_2O'S NEW FORMULA

*"H2nanO is creating technology that applies **untapped energy** in our critical energy, minerals, and power industries to treat and reuse their most important resource: water."*

FOUNDED BY

ZAC YOUNG,
TIM LESHUK,
FRANK GU

zac@h2nano.ca

HQ: Kitchener, ON

h2nano.ca

SOLUTION DESCRIPTION

H2nanO uses surplus industrial energy to treat and reuse process water, turning a costly environmental liability into a sustainable resource. Instead of relying on energy-intensive membranes or adding new electrical load, H2nanO uses nano-engineered surface materials and a modular thermal desalination design powered by waste heat and passive energy. The system consumes up to 10 times less energy than legacy thermal platforms, giving oil and gas, mining, and power generation operators a lower-cost path to water reuse, freshwater recovery, and emissions reduction.

Managing billions of cubic metres of industrial wastewater without increasing carbon emissions is critical as water scarcity threatens the energy transition. A single mid-scale H2nanO installation recovers up to 300,000 cubic metres of fresh water annually, eliminating underground injection and displacing up to 4,000 tonnes of CO_2 emissions. At scale, this allows water-intensive heavy industries to redirect treated process water toward water-stressed sectors like agriculture.

H2nanO solves complex industrial liabilities—such as mine water treatment and brine disposal—without compounding environmental impacts. By engaging with regulatory bodies and industry networks to advance water reuse policies, H2nanO converts wasted process water and stranded heat into valuable assets, helping heavy industry transition to net-zero while reinforcing Canada's leadership in global water stewardship.

IMPACT
Environmental & Productivity Potential

10x
greater distillation heat efficiency

UP TO 50%
lower volumetric cost of brine desalination







BC COMPANY

THE NEXT GENERATION OF SUSTAINABLE PROTEIN



POWERED BY FUNGI

> *"Our ingredients are built to work inside real manufacturing systems without sacrificing **taste, functionality, or scalability**."*

SOLUTION DESCRIPTION

Maia Farms helps food manufacturers create better, more resilient products using high-performance ingredients derived from oyster mushroom mycelium. As the food industry struggles to balance clean-label consumer demands with the environmental toll of traditional proteins, Maia Farms offers a highly functional alternative.

Utilizing submerged liquid fermentation, the company upcycles low-value agricultural side streams into textured protein blends, flours, and powders. Unlike many alternative proteins, these ingredients perform seamlessly within existing equipment for soups, snacks, blended meats, and ready meals. By delivering improved protein, fiber, and texture at a competitive cost, Maia Farms offers R&D teams a scalable solution that reduces formulation complexity and reliance on animal agriculture.

The global food system is under unprecedented strain from climate pressure, resource constraints, and unstable supply chains, making sustainable protein production a critical priority. With a fast 10-day production cycle, vertical fermentation uses a fraction of the land and water required by conventional livestock while diverting agricultural by-products from waste streams. The technology improves access to affordable, high-quality nutrition without requiring shifts in consumer behavior. By partnering with food banks and institutional meal providers, Maia Farms strengthens community food security and protects against supply chain shocks. The company's distributed manufacturing model co-locates with existing agricultural infrastructure, creating a localized circular bioeconomy that minimizes transport emissions. By converting regional agricultural waste into premium functional protein, Maia Farms helps food manufacturers boost yields, cut resource demands, and build a more resilient food supply.

IMPACT

Environmental & Productivity Potential

100% Upcycled Feedstocks

Transforms agricultural side streams and low-value waste into high-value, clean-label protein ingredients.

50%+ Reduction in Land & Emissions

Cuts land use and GHG emissions compared to animal proteins via vertical fermentation.



FOUNDED BY

GAVIN SCHNEIDER,
ASHTON OSTRANDER,
DR. SEAN LACOURSIERE

gavin@maiafarms.ca

HQ: Vancouver, BC

maiafarms.com



IMPACT

Environmental & Productivity Potential

0 livestock required

0 methane emissions

0 compromise on taste

*“Opalia is leading the world’s transition to a **more sustainable food system** starting with cell-based dairy products that don’t compromise on quality.”*

FOUNDED BY

JENNIFER CÔTÉ, LUCAS HOUSE

jennifer@opaliafoods.com

HQ: Montreal, QC

opaliafoods.com

RETHINKING DAIRY: NO COWS REQUIRED

SOLUTION DESCRIPTION

Opalia is leading the transition to a sustainable global food system by developing cell-based dairy ingredients that match the taste, functionality, and quality of traditional milk.

Produced directly from mammary cells without livestock, Opalia’s milk contains identical components to cow’s milk, allowing dairy processors to integrate it seamlessly into existing manufacturing infrastructure. This solution enables food and beverage companies to preserve established formulas—saving millions in R&D—while unlocking customizable options such as lactose-free, low-cholesterol, or high-casein variants for specialized applications.

Decarbonizing agriculture is an urgent priority, as traditional dairy relies on resource-intensive livestock that consume massive amounts of land and water while generating heavy methane emissions. Opalia directly mitigates this impact, cutting greenhouse gas emissions by up to 95%, land use by 90%, and water consumption by 97%. Beyond these environmental metrics, the technology addresses global food security by providing a resilient, localized supply protected from climate shocks, pandemics, and supply chain disruptions.

Opalia enables continuous milk production directly inside commercial processing facilities. This decentralized model eliminates farm-to-factory transport—saving an estimated $560 million annually in Canada alone—while securing a steady supply of premium ingredients. Through partnerships with global dairy leaders like Hoogwegt, Opalia meets rising consumer demand without exceeding ecological limits, positioning Canada for long-term leadership in sustainable food production.

BC COMPANY

MAKING *WAVES*

IN URBAN WATER MANAGEMENT

*“Orca applies proven **behavioural psychology** techniques to turn water data into action.”*

SOLUTION DESCRIPTION

Orca Water Solutions is building the intelligence layer for water management, addressing the critical lack of visibility into how water is used, lost, and billed in the built environment. Using patented, non-intrusive technology that combines ultrasonic measurement, acoustic sensing, and software, Orca delivers real-time, suite- and fixture-level data without costly pipe-cutting or plumbing retrofits. This seamless integration gives property owners an affordable, high-precision solution for submetering and leak mitigation, empowering multi-residential operators to implement fair, consumption-based billing and protect against expensive water damage.

As urbanization and climate change strain municipal water systems, managing consumption and preventing building water loss is an urgent priority. Orca addresses this challenge by making water use visible and actionable, significantly reducing both water consumption and the energy required to heat it. By leveraging behavioural feedback, the platform gives residents a direct financial incentive to conserve. A 30% reduction in water use across a typical 100-suite building saves nearly 5,500 cubic meters of water and 79,000 kWh of hot-water energy annually—preventing treated water loss, reducing flood-restoration carbon, and eliminating cost cross-subsidization between households.

Currently expanding to commercial scale through a major deployment with TELUS Living, Orca is creating the foundational data layer required for intelligent urban water management. By shifting the industry away from disruptive plumbing overhauls toward scalable, software-enabled sensors, Orca provides real estate developers and municipalities with the tools to plan infrastructure responsibly, positioning Canada for long-term leadership in urban climate resilience.

FOUNDED BY

KERRY CHIN

kchin@orcawater.ca

HQ: Burnaby, BC

orcawater.ca

IMPACT

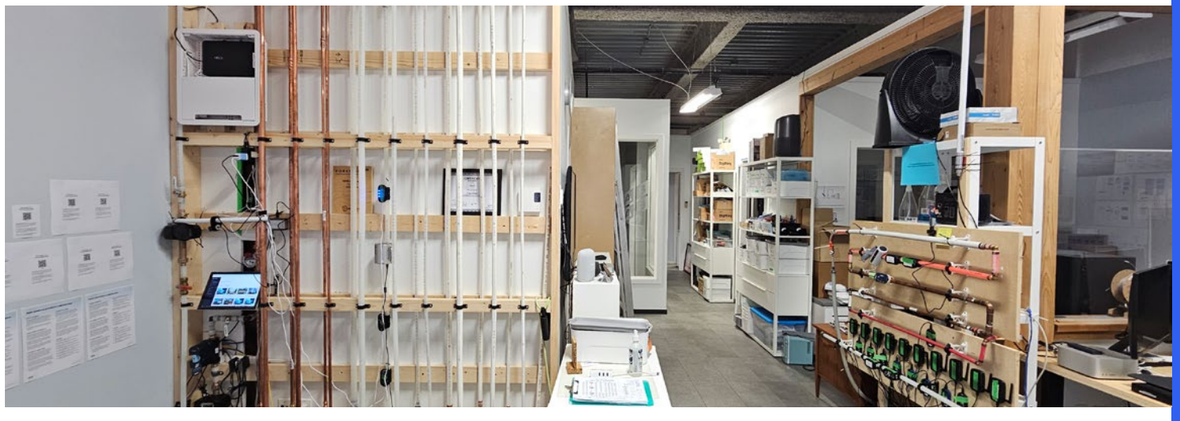
Environmental & Productivity Potential

500+ Units Monitored
Deployed across 11 multi-residential properties to deliver real-time, unit-level consumption insights.

Early Leak Detection
Continuous monitoring that catches leaks early, protecting owners from water loss risks.









IMPACT

Environmental & Productivity Potential

10%–30% Yield Boost
Dynamic drone shading protects heat-sensitive crops from solar stress, preventing crop loss and boosting harvests during extreme heatwaves.

15%–25% Water Savings
Targeted canopy coverage cuts evaporation and soil moisture loss, significantly reducing irrigation needs in arid regions.

Capital-Light Protection
Replaces costly, carbon-heavy fixed agrivoltaics with programmable drone swarms that deploy without permanent construction or loss of farmable land.

SKY-HIGH YIELDS, GROUND LEVEL SAVINGS

*“SkyArc’s programmable aerial shade **reduces crop heat stress** and irrigation demand by dynamically controlling canopy-level solar exposure.”*

FOUNDED BY

BRENNON D’SOUZA
brennon@skyarc.tech
HQ: London, ON
skyarc.tech

SOLUTION DESCRIPTION

SkyArc builds programmable aerial shade to protect high-value crops—like berries, grapes, and leafy greens—from extreme heat and water loss, addressing increasing climate volatility in arid agricultural regions. Coordinated swarms of solar-powered drones form an overhead canopy that manages sunlight right at the crop level. By shading plants during heat spikes, SkyArc gives growers a flexible alternative to permanent agrivoltaics—cutting irrigation needs and crop losses without the high costs and heavy carbon footprint of fixed structures.

Rising temperatures and water scarcity threaten crop yields and farm bottom lines. SkyArc’s dynamic shade boosts yields by 10% to 30% and cuts irrigation demand by 15% to 25% during heatwaves. The lightweight system reduces water, energy, and fertilizer needs without requiring heavy site construction. This keeps farm income stable in heat-vulnerable regions while giving smaller operations affordable tools to adapt.

By combining robotics and precision agriculture, SkyArc introduces a new way to build climate-resilient farms. Replacing permanent structures with programmable drone shade allows commercial growers to respond to shifting weather without losing farmable land—protecting crop yields while conserving local water supplies.

INFRASTRUCTURE

TRANSFORMING HOW WE **LIVE, WORK, AND MOVE**

Infrastructure is the backbone of a competitive economy, directly shaping how Canadians live, work, and move. Building and powering a net-zero future requires bridging the gap between industrial scale and clean innovation.

The technologies featured in this section represent the modern foundation for Canada's built environment, energy grids, transportation networks, and waste management systems—turning climate imperatives into reliable, long-term strength.

Modular, high-performance construction systems and smart building technologies designed to decarbonize Canada's structures while strengthening community resilience against extreme weather.

Smart grid, long-duration storage, and renewable power innovations accelerating the massive scaleup required for a decentralized, reliable, and carbon-neutral energy supply.

Electrification, eco-friendly alternative fuels, and advanced logistics tech that future-proof trade corridors, reduce public health impacts, and clean up a sector that accounts for nearly 25% of our national greenhouse gas emissions.

Modernized waste recovery and conversion, sorting, and diversion systems that optimize material flow, turn waste into renewable feedstocks, and build circular infrastructure for resilient communities.



SEA-ING
THE FUTURE OF TRANSPORTATION

"Seawater in. Jet fuel out."

SOLUTION DESCRIPTION

Aeon Blue produces carbon-negative jet fuel and eFuel feedstocks directly from seawater, eliminating the primary cost and scalability bottlenecks facing sustainable aviation fuel.

Airlines, engine manufacturers, and fuel producers struggle to secure scalable, price-competitive alternatives to fossil Jet-A to meet stringent decarbonization mandates. Aeon Blue solves this challenge through a patented seawater electrolysis platform that yields AeonAir® eSAF alongside essential feedstocks for the broader synthetic fuels sector.

While delivering fossil price parity and an unconstrained raw material supply, every tonne of AeonAir® eSAF replacing fossil Jet-A removes approximately 4.2 tonnes of CO_2 from the atmosphere on a lifecycle basis.

Decarbonizing global aviation is an urgent environmental challenge that requires immediate, scalable chemical solutions. Aeon Blue's technology is inherently carbon-negative, removing significantly more carbon during production than is released during fuel combustion.

Validated by Los Alamos National Laboratory and UBC, the process achieves a lifecycle carbon intensity of up to –165 gCO_2/MJ, compared to +131 gCO_2/MJ for fossil jet fuel. Aeon Blue operates a commercial joint venture with the Eskasoni Mi'kmaq First Nation, establishing co-ownership, local hiring, and structured youth engineering internships to build generational community wealth.

By ditching land-heavy feedstocks and energy-intensive desalination, Aeon Blue is rethinking how we make synthetic fuels. Their dual capability to supply both finished eSAF and foundation feedstocks positions the company as a critical infrastructure partner for global energy transition.

IMPACT

Environmental & Productivity Potential

~4.2 tCO_2

avoided per tonne of fossil Jet-A replaced

–165 gCO_2/MJ

carbon intensity vs. +131 gCO_2/MJ for traditional jet fuel

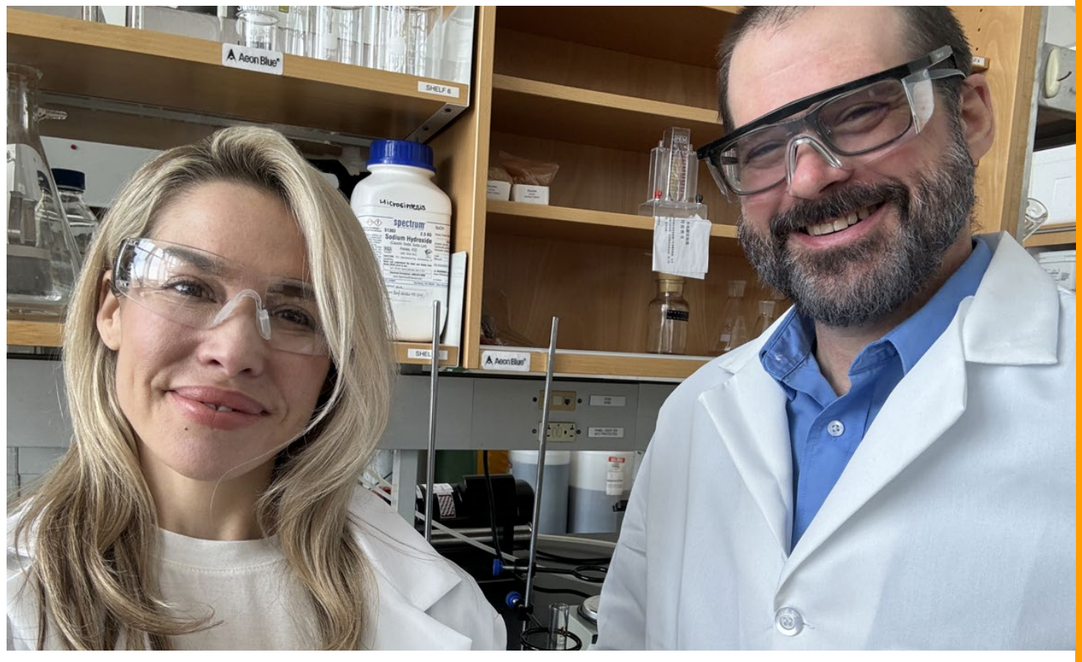
FOUNDED BY

LARK MEADOW

lark@aeonblue.ca

HQ: Sydney, NS

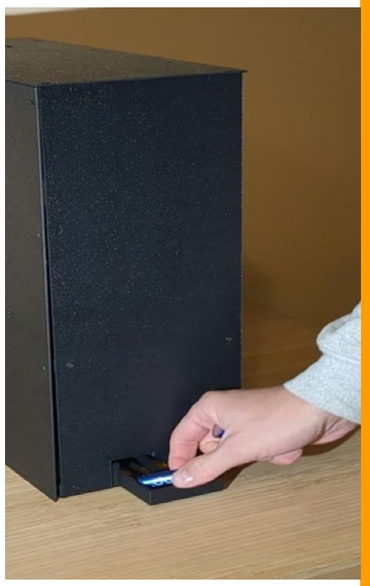
aeonblue.ca



DITCHING DISPOSABLE







SOLUTION DESCRIPTION

Aisen operates a battery infrastructure-as-a-Service model that replaces single-use workplace batteries with a managed, closed-loop rechargeable NiZn network.

Institutions across healthcare, government, broadcasting, and manufacturing currently purchase and discard millions of disposable AA and AAA batteries annually, creating massive physical waste and procurement burdens. Aisen eliminates this through its EcoStation smart-locker system, which automatically dispenses charged NiZn cells, collects depleted units, and tracks a detailed per-cell data stream. This turnkey service provides mid-to-large institutions with up to 96% lower per-cycle emissions than traditional alkaline batteries while delivering zero procurement hassle and full extended producer responsibility compliance.

Replacing single-use batteries eliminates a major source of toxic landfill waste and helps institutions meet their carbon reduction goals. Each Aisen rechargeable cell replaces up to 150 single-use alkaline batteries over its multi-year operational life. Certified lifecycle analysis shows a 96.7% per-cell greenhouse gas reduction compared to disposable alternatives.

Across seven years of live commercial operations, Aisen has delivered over 99,700 batteries across paying customers with an 84% recovery rate, avoiding 2.5 tonnes of CO_2e and preventing 2.3 tonnes of battery waste. Aisen also offers a transformative utility model for remote and Indigenous communities, where battery shipping costs are high and local recycling infrastructure is non-existent.

Instead of the usual “buy, use, toss” cycle, Aisen gives institutions a circular, data-driven way to manage everyday consumables. It’s a clear example of how smarter logistics and business design can slash emissions at scale.

IMPACT
Environmental & Productivity Potential

99,706
batteries delivered in 7 years

84%
recovery rate

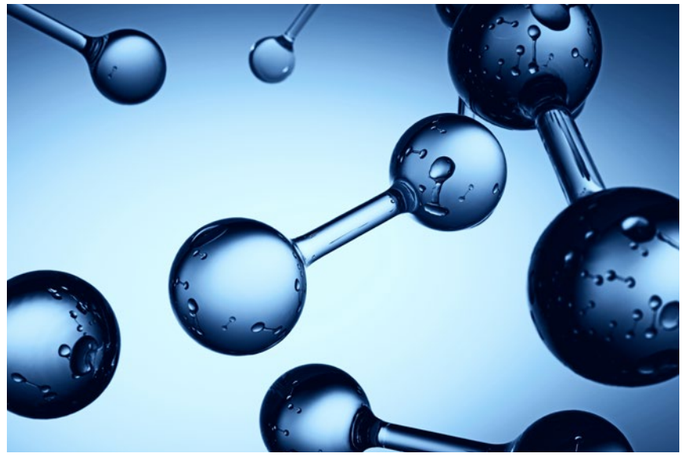
> *“On-site charging via EcoStation eliminates the delivery leg entirely: the **reduction is structural**, not behavioural.”*

FOUNDED BY

ROBERT EISENBRUK
r.eisenbruk@aisen.ca
HQ: Montreal, QC
aisen.ca

LIQUID GOLD

HYDROGEN'S NEXT FRONTIER





> *"Our proprietary system comes at a pivotal time for the global hydrogen market, poised to eliminate these logistical barriers and foster* ***widespread adoption.****"*

SOLUTION DESCRIPTION

Ayrton Energy simplifies hydrogen transportation and storage through its proprietary electrochemical Liquid Organic Hydrogen Carrier (e-LOHC™) platform, unlocking hydrogen as a practical clean energy source.

Conventional hydrogen logistics suffer from high storage losses, pipeline corrosion, and extreme capital costs associated with specialized infrastructure. Ayrton solves these systemic barriers by chemically binding hydrogen to a stable organic liquid that is fully compatible with existing liquid fuel infrastructure. This enables hydrogen producers, distributors, and industrial users to store and transport clean hydrogen safely, efficiently, and at a significantly lower operational cost than traditional high-pressure gas or cryogenic liquid systems.

Ayrton tackles hydrogen's biggest bottleneck—logistics—with a liquid storage method that eliminates boil-off during transport. This makes long-duration storage practical and allows high-output regions like Alberta to efficiently supply the global market. Ayrton plans to grow its team of specialized talent, directly contributing to Alberta's target of 200,000 hydrogen sector jobs by 2035.

Beyond global trade, their technology offers a practical clean energy source for remote Indigenous communities relying on diesel generators. By making hydrogen safe and easy to store locally, it provides a clean, quiet energy alternative that cuts emissions and improves local air quality.

Ayrton Energy enables the hydrogen sector to tap into existing liquid fuel supply chains. By eliminating the need for costly new pipelines or specialized storage facilities, the company is helping to accelerate time-to-market for clean hydrogen deployments across Canada and beyond.

FOUNDED BY

NATASHA KOSTENUK
nkostenuk@ayrtonenergy.com
HQ: Calgary, AB
ayrtonenergy.com

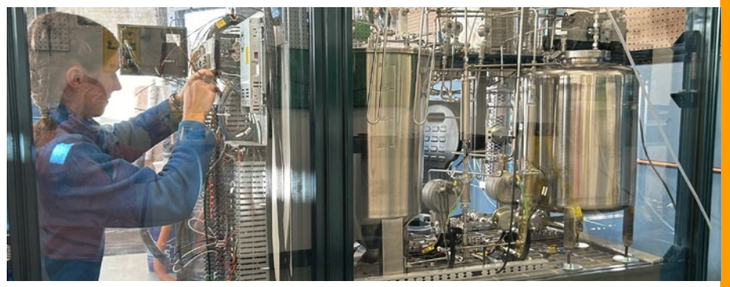
IMPACT

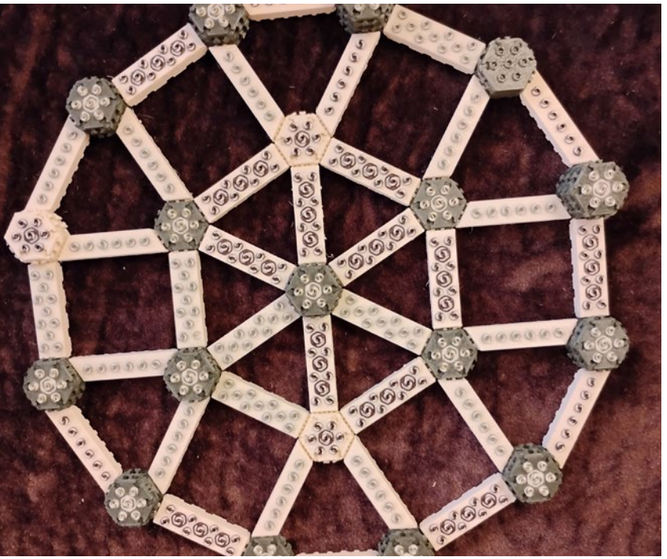
Environmental & Productivity Potential

Zero-Loss Storage
Stops boil-off entirely, making long-distance transport safe, simple, and cost-effective.

Infrastructure Compatibility
Uses today's liquid fuel storage and transport assets—cutting capital costs and accelerating time-to-market.

Off-Grid Energy Security
Delivers a safe, long-duration clean power alternative to remote communities—cutting fuel import costs and emissions.







IMPACT

Environmental & Productivity Potential

BioLith locks in biogenic carbon for up to a century by transforming agricultural crop waste into **high-performance, sustainable building materials**—outperforming traditional concrete and polystyrene foam on weight, durability, and cost while eliminating field-burning emissions and ocean-polluting plastics.

*"Our model converts low-cost agricultural residues—abundant across the prairies—into **durable, carbon-sequestering building products** that industry and infrastructure operators can adopt today."*

FOUNDED BY

MATTHEW GOODWIN,
JOHN RICHARDSON

matt@biolithenterprises.com

HQ: Regina, SK

biolithenterprises.com

CROP WASTE, **REIMAGINED**

SOLUTION DESCRIPTION

BioLith Enterprises Inc. transforms prairie agricultural residues into high-performance composite construction and marine materials, eliminating a carbon-intensive waste stream while offering superior building products.

Traditional concrete, steel, and expanded polystyrene foam carry massive embodied carbon footprints, while adding to the growing crisis of marine plastic pollution. BioLith's platform utilizes a proprietary fibre mineralization process that permanently waterproofs and hardens seed-flax fibre residue into structural blocks, with product lines including LithoBrick for terrestrial applications and SeaBrick for buoyant marine infrastructure. These lightweight modular products outcompete conventional materials on cost, weight, and lifecycle emissions while providing multi-decade structural durability.

Putting crop leftovers to work drives rural decarbonization while creating a smarter, less wasteful supply chain. Prairie seed-flax straw is traditionally burned in fields, releasing CO_2, methane, and particulate matter. BioLith's process encapsulates this flax fibre, permanently locking in biogenic CO_2 for its service life of 25 to 100 years while avoiding field-burning emissions. In marine environments, SeaBrick eliminates persistent polystyrene marine debris. BioLith's model also empowers Indigenous coastal communities: Haíłzaqv Ocean Solutions, a majority Indigenous-owned entity, holds exclusive West Coast rights to manufacture and deploy SeaBrick, keeping infrastructure revenue and skilled jobs within the community.

BioLith Enterprises is revitalizing the building materials sector by turning low-cost agricultural waste into structural, carbon-sequestering assets. By creating high-volume industrial demand for crop residue, the company diversifies prairie agricultural income while delivering modular construction solutions to remote coastal regions, highlighting Canadian leadership in circular advanced manufacturing.

BlueForce

BC COMPANY



IMPACT

Environmental & Productivity Potential

14–17 tCO_2

annual lifecycle emissions reduced per vehicle

60–70%+

lower capital cost

$5–7K+

potential annual clean fuel credit value generated per vehicle

SKIP THE **NEW FLEET**

THE SHORTCUT TO ELECTRIFICATION

*"BlueForce Energy is building the **next generation** of commercial vehicle electrification platforms."*

FOUNDED BY

TAO PENG

corporate@blueforceenergy.ca

HQ: Burnaby, BC

blueforceenergy.ca

SOLUTION DESCRIPTION

BlueForce Energy develops proprietary chassis-specific Battery Electric (BEV) and Range-Extended Electric (REEV) powertrain platforms that enable commercial fleet operators to electrify existing medium- and heavy-duty vehicles.

Purchasing new commercial electric vehicles presents a major capital barrier for municipalities, utilities, airports, and emergency service providers. BlueForce solves this by converting existing fleet assets with repeatable powertrain repowers—slashing capital costs by up to 50% compared to buying new.

Validated through more than 18 months of real-world commercial operations and Vehicle-to-Load (V2L) demonstrations, BlueForce delivers a proven, practical path to low-cost fleet electrification.

Medium- and heavy-duty vehicles represent a large share of urban transport emissions, making electrification an urgent environmental priority. BlueForce's technology extends vehicle operating life by 5 to 10 years, cutting manufacturing waste, raw material demand, and CO_2 emissions.

By eliminating the steep capital premium of purchasing new vehicles, BlueForce allows public and private operators to stretch their budgets, make fleet electrification accessible, and accelerate the transition to a low-carbon economy.

BC COMPANY

NO PORTS.
NO PROPELLERS.
NO PROBLEM.

NEXT-GEN MARITIME MOBILITY



*"an unmatched combination of **efficiency and amphibious capability.**"*

SOLUTION DESCRIPTION

Celerity Craft is reshaping marine transit with its Dynamic Air Cushion Vehicle (DACV) trimaran design—built to slash fuel burn, access hard-to-reach routes, and outpace conventional vessels.

Traditional marine logistics are constrained by high fuel consumption, slow transit speeds, and heavy dependence on deep-water ports and expensive dock infrastructure. Celerity resolves these constraints with a vessel design that rides on a pressurized cushion of air above the water's surface, enabling high speeds with exceptional efficiency.

Operating without a submerged hull or propellers, Celerity's vehicles require no port infrastructure, granting seamless amphibious access across water, land, mud, and ice for commercial and defence operators.

Decarbonizing maritime transit is critical to protecting fragile marine ecosystems. Celerity's air-cushion design cuts emissions far below traditional hull vessels and unlocks true zero-emission electric range for short-haul trips. Eliminating underwater propellers removes the risk of whale strikes, drastically reduces marine acoustic noise, and produces minimal wake to protect sensitive shorelines.

Additionally, Celerity provides critical high-speed connectivity to isolated coastal communities—facilitating life-saving emergency medical response, essential cargo delivery, and service access without requiring port investments.

Celerity Craft is rethinking coastal logistics with a platform that moves like a ship but performs like an aircraft. Built for both commercial and defence fleets, this multi-purpose DACV trimaran cuts operating costs, opens up hard-to-reach shores, and minimizes disturbance to local marine ecosystems.

IMPACT

Environmental & Productivity Potential

Zero Port Infrastructure
Requires no deep-water docks or ports—granting seamless, all-terrain access across water, land, mud, and ice.

Zero Propellers
Eliminates underwater propellers to prevent whale strikes, cut underwater acoustic noise, and minimize shoreline erosion wakes.

Emissions Reductions
Cuts marine CO_2 emissions by 50–70% in a 1-billion-tonne-per-year industry, slashing fuel burn on standard routes.

FOUNDED BY

RICHARD MACKELLAR,
OLEN VANDERLEEDEN,
ROBERT KEIR,
DYLAN MORGAN,

rmackellar@celeritycraft.com

HQ: Squamish, BC

celeritycraft.com

KEEPING THE GRID
CURRENT

*"CRWN is uniquely positioned to support wildfire prevention, grid reliability, and First Nations-aligned infrastructure **across Canada and beyond.**"*

FOUNDED BY

BRITTANY COURVOISIER-NICOL,
ERIC MILLER,
DAVID LOYDON

brittany.nicol@crwn.ai

HQ: Kelowna, BC

crwn.ai

SOLUTION DESCRIPTION

CRWN.ai builds predictive intelligence for the electrical grid by deploying solar-powered IoT sensors directly on high-voltage transmission lines.

Electric utilities struggle to detect early insulator degradation, partial discharge, and asset wear, often leading to sudden outages, costly emergency repairs, and utility-ignited wildfires. CRWN.ai solves this with compact acoustic and radio-frequency sensors that detect micro-defects long before flashovers occur. This real-time visibility gives operators clear data for capital planning—replacing expensive helicopter sweeps with continuous, automated grid updates at a fraction of the cost.

Grid resilience and forest protection go hand in hand. By catching line failures early, CRWN.ai optimizes field dispatch to cut both power downtime and operational emissions.

Beyond grid reliability, the company enhances safety for remote and First Nations communities while actively advancing toward 51%+ Indigenous corporate ownership.

Ultimately, CRWN.ai is modernizing critical infrastructure by replacing sporadic physical inspections with continuous grid intelligence. By identifying high-risk assets before they fail, the platform protects non-redundant power corridors that keep entire regions powered—positioning Canada at the forefront of wildfire prevention and climate-resilient energy infrastructure.

IMPACT

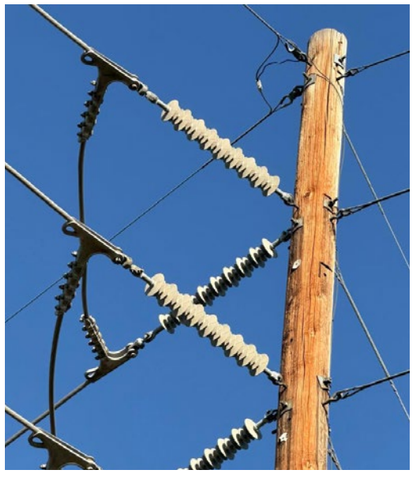
Environmental & Productivity Potential

~1,200 tCO_2e

avoided on an average fossil grid over 5 years

~2.5 GWh

line energy losses saved over 5 years







CURA

CEMENT

WITHOUT THE GREEN PREMIUM

*"We are solving one of the **world's largest carbon emission challenges.**"*

FOUNDED BY

ERIN BOBICKI (PhD),
SABRINA SCOTT (PhD),
PHIL DE LUNA (PhD),
CURTIS BERLINGUETTE (PhD)

sabrina@curaclimate.com

HQ: Calgary, AB

curaclimate.com

SOLUTION DESCRIPTION

CURA Climate decarbonizes cement production using a patented electrochemical precalcination process that splits limestone using clean electricity instead of fossil heat.

Cement manufacturing is responsible for 8% of global carbon emissions, primarily driven by high-temperature limestone calcination that releases process CO_2. CURA addresses this by replacing traditional thermal calcination with an electrochemical system that isolates pure CO_2 prior to kiln processing. Designed as a retrofit-ready add-on that works with existing raw feedstocks and kilns, CURA allows the production of low-carbon cement at cost parity without replacing existing infrastructure.

Lowering the carbon footprint of cement is critical to the future of urban development. CURA's technology addresses this hard-to-decarbonize sector, abating up to 85% of process emissions. The company focuses on delivering accessible, affordable, and scalable low-carbon building solutions, so industries and local communities can achieve decarbonization with realistic costs.

CURA Climate is delivering practical carbon abatement technology for cement plants worldwide. By maintaining profit margins for producers and avoiding green cost premiums for builders, CURA accelerates practical industry adoption. Their solution highlights Canadian leadership in industrial decarbonization, creating a scalable path toward net-zero concrete and resilient global infrastructure.

IMPACT
Environmental & Productivity Potential

100%
compatibility with existing infrastructure

UP TO 85%
reduction in process emissions





CONQUERING THE TALLEST PEAK

*"We provide an **all-in-one** AI energy management platform."*

FOUNDED BY

BEHDAD BAHRAMI,
MEHDI PARVIZIMOSAED

bbahrami@edgecom.ai

HQ: North York, ON

edgecom.ai

SOLUTION DESCRIPTION

Edgecom Energy provides an AI-driven platform that enables commercial and industrial facilities to cut peak electricity demand, automate demand response, and dispatch distributed energy resources.

Industrial operators face soaring peak charges and complex grid requirements, but dedicated engineers and enterprise automation are often cost-prohibitive. Edgecom solves this with an IoT and AI system that forecasts peaks and automatically shifts loads. Deployed across 256+ facilities managing over 1 GW of load, Edgecom reduces peak demand costs by 30% with zero capital expenditure.

Replacing fossil-fueled peaker plants with automated commercial load shifting is one of the fastest ways to clean up the power grid. By curtailing peak demand during high-stress hours, Edgecom eliminates the need to fire natural gas peaker turbines—the grid's highest-emitting generators. Edgecom has delivered over $350M in cumulative customer savings to mid-sized Canadian manufacturers, preserving jobs while reducing air pollution in communities adjacent to fossil peaker plants.

As a Certified B Corp, Edgecom Energy lowers electricity bills for local businesses while providing utilities with a reliable alternative to costly infrastructure upgrades. The company's AI platform enables widespread, smart energy control in commercial buildings without the high upfront expense, long rollout timelines, or specialized staff.

IMPACT

Environmental & Productivity Potential

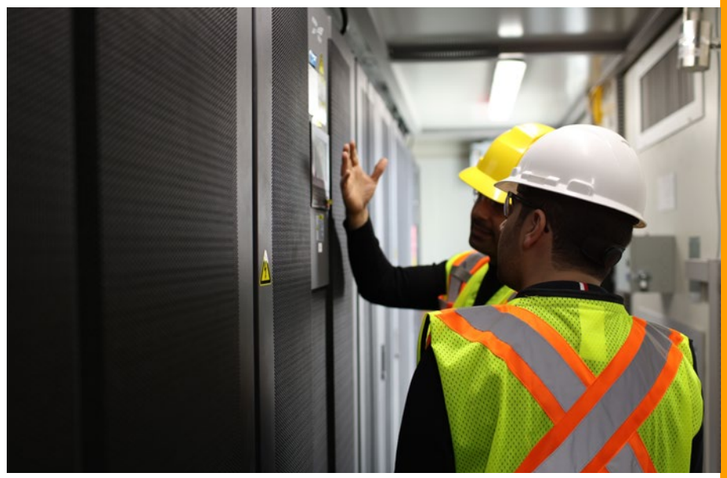
$350M+

in annual energy cost savings for customers

~ 20–60 $ktCO_2e$

annual emissions avoided







BC COMPANY



IMPACT

Environmental & Productivity Potential

30%
reduction in fuel consumption

UP TO $60K
in annual fuel cost savings per vehicle

DECARBONIZING HEAVY INDUSTRY
WITHOUT SACRIFICING POWER

*"Edison aims to **reduce emissions** from the most polluting vehicles on Canada's Roads."*

FOUNDED BY

ERIC LITTLE,
CHACE BARBER

eric.little@edisonmotors.ca

HQ: Golden, BC

edisonmotors.ca

SOLUTION DESCRIPTION

Edison Motors builds heavy-duty, hybrid-electric vocational trucks engineered for extreme power, simple maintenance, and challenging off-road industrial duties.

Medium- and heavy-duty trucks generate a disproportionate share of North American road emissions. Edison addresses this by supplying hybrid powertrains for logging, mining, oilfield, and construction fleets—giving operators a practical, field-tested path to decarbonization in remote environments.

Targeting severe-service vehicles maximizes the environmental return on fleet electrification. Edison's trucks cut fuel consumption by over 30% while preserving diesel-equivalent power and range. Electric drive motors also reduce mechanical wear, lowering long-term maintenance costs. Beyond emissions, the company's Golden, BC facility creates high-value manufacturing jobs, technical apprenticeships, and trade training in rural British Columbia.

By proving hybrid electrification can thrive in the toughest industrial settings, Edison creates a scalable technology base—starting where battery-electric range falls short today, before expanding into long-haul highway transport. In doing so, the company provides a commercially viable blueprint to help Canada decarbonize its most energy-intensive, hard-to-abate heavy industries.



IMPACT

Environmental & Productivity Potential

50%+
powertrain weight reduction

~70%
physical footprint reduction

4-IN-1
integrated components

"Transportation is one of the largest sources of global greenhouse gas emissions, and the binding barrier to displacing it is the cost and material intensity of the EV powertrain. ***eLeapPower attacks both."***

FOUNDED BY

TONY HAN,
RUSSELL PULLAN

than@eleappower.com

rpullan@eleappower.com

HQ: North York, ON

eleappower.com

LIGHTER, SMARTER, FARTHER

STREAMLINING THE EV POWERTRAIN

SOLUTION DESCRIPTION

eLeapPower develops integrated power electronics that combine the onboard charger, DC/DC converter, power distribution unit, and motor controller into a single low-cost, low-weight EV powertrain platform.

Global EV adoption is hindered by high powertrain costs, heavy system weight, and severe semiconductor supply bottlenecks. eLeapPower solves this with a functionally integrated, multi-in-one powertrain that relies on widely available industrial components rather than custom microchips. This streamlined design reduces weight by over 50% and physical footprint by nearly 70%—lowering energy consumption per kilometre, manufacturing emissions, and upfront vehicle costs.

By improving energy conversion efficiency and reducing raw-material demand during production, eLeapPower makes EVs more affordable for mainstream buyers, including price-sensitive two- and three-wheeler markets in emerging economies where urban air pollution presents severe public health risks.

Already deployed in over 1,000 vehicles across North America, China, and India, eLeapPower provides automotive OEMs with a resilient, highly scalable supply chain solution. By advancing Canadian power electronics design, eLeapPower drives global transport electrification while expanding domestic cleantech exports.





INTELLIGENT **MICROGRIDS**, INSTANT **ELECTRIFICATION**







SOLUTION DESCRIPTION

Enerbund manufactures a modular power electronics and software orchestration platform that enables homes, businesses, and utilities to electrify rapidly without expensive grid infrastructure overhauls.

Grid capacity bottlenecks and high transformer upgrade costs delay the adoption of electric vehicles, heat pumps, and renewable energy. Enerbund solves this using common, reprogrammable hardware units that dynamically manage distributed energy resources including solar, batteries, generators, building loads, and EV charging. This maximizes existing electrical capacity, lowers installation expenses, and provides emergency backup power for residential, commercial, and off-grid customers.

Optimizing distributed energy resources significantly reduces diesel dependence and peak grid stress. In off-grid applications, Enerbund's DG Optimizer converts remote diesel generators into efficient hybrid systems by integrating battery storage and smart controls, reducing generator runtime by up to an estimated 85%, and cutting fuel consumption and CO_2 emissions.

The EnRouter is a smart residential energy router that integrates solar, battery storage, grid connections, generators, and EV charging to maximize onsite solar usage and enable load shifting. For utilities, Enerbund is developing Point-X Control—a distribution-system overload management product designed to mitigate local grid strain and defer costly capital upgrades.

Enerbund is supplying a platform to enable utilities and building owners to increase clean energy capacity without waiting for physical grid expansions. Supported by over 60 patents and university research partnerships, Enerbund positions Canada as a global leader in intelligent microgrid technology and distributed energy management.

FOUNDED BY

ALI KHAJEHODDIN
alik@enerbund.com
HQ: Edmonton, AB
enerbund.com

"Enerbund is building the intelligent energy orchestration platform that enables homes, businesses, and utilities to ***electrify faster.****"*

IMPACT

Environmental & Productivity Potential

Enerbund's modular hardware and software platform bypasses costly grid upgrades to accelerate electrification, reducing off-grid diesel generator runtime by up to ~85% while **unlocking immediate clean energy capacity and continuous backup power** for homes, businesses, and utilities.

SMART HEATING, STRATEGIC SAVINGS, TABLE GRID.



"iGEN transforms residential heating systems into distributed power plants, ***converting excess heat into electricity."***

FOUNDED BY

HAR GROVER,
GEOFF MCCORD,
SIMON REDFORD,
NIGEL ETHERINGTON

hgrover@igentechnologies.ca

HQ: Toronto, ON

igentechnologies.ca

SOLUTION DESCRIPTION

iGEN Technologies Inc. transforms residential heating systems into distributed power plants, mitigating the severe strain that electrification and rising power demand place on aging electrical grids. The company has developed a fuel-agnostic thermodynamic Power Module that integrates seamlessly into existing HVAC appliances. Operating between a high-temperature heat source and a lower-temperature system, this patented circuit converts excess thermal energy into high-value electricity.

For global HVAC manufacturers, iGEN provides a low-maintenance co-generation solution at a unit cost comparable to a standard cooling appliance. For homeowners, the technology lowers utility costs by generating localized power without sacrificing winter comfort, delivering commercial-scale energy efficiency directly to the consumer market.

As electric vehicles and heat pumps push regional energy grids to their limits, deploying decentralized solutions to manage peak demand is an urgent priority. iGEN addresses this by turning household heating into an active grid asset. When paired with air-source heat pumps during extreme cold—when grid stress peaks and pump efficiency drops—the iGEN system can reduce peak winter residential electrical demand by over 80%. This directly displaces the need for carbon-intensive central peak power generation.



This technology ensures reliable backup power during extended grid outages, supplying localized electricity for heating, lighting, and critical communications. By cutting lifecycle heating costs by nearly half compared to full electric retrofits, the system delivers immediate, long-term energy affordability.

iGEN demonstrates that distributed infrastructure is vital to a stable energy transition. By embedding clean generation behind the meter, its heat-source-agnostic technology enables hybrid heating systems that meet immediate decarbonization targets while remaining commercially viable

Equipping just 12% of Ontario homes could offset 500 MW of peak demand—saving billions in grid upgrade costs—while integrating seamlessly with future renewable gases and thermal storage.

IMPACT

Environmental & Productivity Potential

80%
reduction in peak winter residential energy demand

500 MW
demand offset achievable at 12% residential adoption



IMPACT

Environmental & Productivity Potential

Carbon Displacement
Jouleia's initial 37,000-loan portfolio displaces gas heating to prevent nearly one million tonnes of lifecycle CO_2 emissions.

Contractor Productivity
Embedding financing directly into contractor quotes eliminates sales friction, driving higher conversion rates and larger job sizes.

Capital Efficiency
Blended capital structure passes below-market financing and stacked rebates to homeowners, mobilizing clean energy funding at scale.

FOUNDED BY

PAUL SEHR
paul@jouleia.com
HQ: Toronto, ON
jouleia.com

CLOSED AT "THE KITCHEN TABLE"

POINT-OF-SALE FINANCING FOR HOME ENERGY RETROFITS

*"Retrofit financing isn't really a demand problem, it's a capital distribution problem—**getting the right capital to the right homeowner through the right contractor, at the moment of decision.**"*

SOLUTION DESCRIPTION

Jouleia is a Canadian climate fintech company accelerating the transition to low-carbon homes by equipping contractors with specialized digital tools and integrated capital. Addressing retrofit adoption as a capital distribution challenge, Jouleia uses a B2B2C model to deploy point-of-sale financing directly at the "kitchen table." The platform offers homeowners affordable monthly payments, instant rebate stacking, and same-day approvals at rates below conventional unsecured markets. This removes purchasing friction, boosting contractor close rates and average order values while driving adoption of heat pumps, solar, battery storage, and resilience upgrades.

Residential decarbonization is urgent, as homes account for a substantial share of Canada's greenhouse gas emissions. Without accessible financing, market-ready clean tech remains out of reach for many homeowners, driving continued reliance on fossil fuels. Jouleia resolves this bottleneck by embedding affordable capital directly into the retrofit decision. Its initial portfolio target of 37,000 loans aims to avoid nearly one million tonnes of CO_2 over a 15-year lifecycle by displacing gas heating. Jouleia also advances energy equity, passing blended capital efficiencies to borrowers at below-market rates while supporting job growth for local trade contractors.

Jouleia connects institutional capital directly with actionable climate solutions. Led by an executive team that scaled Canada's largest contractor financing platform, the company provides strong demand signals for manufacturers, improved underwriting data for insurers, and an efficient mechanism for governments to deploy concessional capital. By solving the distribution gap in retrofit funding, Jouleia turns quoting contractors into active facilitators of the energy transition.



IMPACT

Environmental & Productivity Potential

37% Lifecycle CO_2 Reduction
Certified ISO analysis shows PakVert single-family homes cut lifecycle GHG emissions by 37% over wood-frame construction—saving the equivalent of 393 trees per home over 10 years.

41,600+ tCO_2e Avoided
Projected Quebec adoption is forecasted to prevent 41,644 tCO_2e in cumulative emissions over the next decade.

PLASTIC MEETS PERFORMANCE

*"PakVille is building the technology platform that will enable **the next generation of sustainable housing.**"*

SOLUTION DESCRIPTION

PakVille manufactures high-performance structural building systems using recycled plastic, directly tackling the global shortage of affordable, sustainable housing. By replacing conventional wood-framed assemblies with proprietary structural panels made from recycled PET plastic, the company enables faster, lower-carbon, and more cost-effective prefabricated construction.

With their own operational manufacturing facility, millions in secured contracts, and active commercial deliveries, PakVille provides real estate developers and governments with a proven building solution. The company cuts overall construction costs by roughly 35%, accelerates project timelines, and streamlines on-site assembly.

As governments face unprecedented housing deficits alongside aggressive decarbonization targets, modernizing traditional construction has become unavoidable. PakVille directly addresses both these challenges by turning plastic waste into durable, energy-efficient building envelopes. Replacing conventional materials with recycled PET panels lowers the embodied carbon footprint of construction by 40% while reducing material waste and transportation impacts.

Operationally, the technology cuts heating energy consumption by up to 20% compared to standard code-built homes, lowering utility bills and alleviating energy poverty for occupants. Crucially, PakVille's prefabricated platform enables the rapid deployment of resilient housing across underserved, remote, Indigenous, and disaster-affected communities.

PakVille combines sustainable architecture with high-efficiency modular manufacturing to build scalable, low-carbon housing—the next generation of housing. By advancing circular building principles, PakVille helps public and private developers maximize their capital, delivering more high-quality housing at lower costs.

FOUNDED BY

PARINAZ PAKNIAT
parinaz@pakville.ca
HQ: Dorval, QC
pakville.ca



CAPITAL PROTECTION
BY DESIGN

*"Our technology delivers environmental impact by shifting infrastructure and asset management from reactive reconstruction to **proactive, ROI-driven climate adaptation.**"*

SOLUTION DESCRIPTION

Resiliocs Intelligence powers climate-informed capital decisions, currently supporting resilience strategies across more than US$30B in commercial asset and portfolio value. The platform enables asset owners, insurers, banks, and institutional investors to protect real estate and infrastructure portfolios.

Using AI and engineering-grade models, Resiliocs predicts physical asset risk from climate hazards like flooding, extreme heat, and wildfires—quantifying financial losses and pinpointing high-return adaptation strategies.

By shifting organizations from passive risk visibility to active mitigation, Resiliocs achieves up to a 70% reduction in climate risk exposure at 76% lower cost than traditional, time-intensive consulting.

As extreme weather events become more frequent, relying on reactive emergency repairs incurs heavy financial and environmental costs—generating 200–800 tonnes of embodied CO_2 per $1M in rebuild costs. Resiliocs transitions asset management from reactive recovery to proactive adaptation, cutting expected climate-related financial losses by up to 40% while avoiding the heavy carbon footprint of structural rebuilds. Beyond environmental preservation, the platform delivers social value by identifying vulnerabilities across power, transportation, and healthcare systems. Protecting critical infrastructure prevents widespread service outages, shielding vulnerable communities from displacement and economic loss.

Replacing subjective risk scores with clear financial metrics for climate adaptation, Resiliocs directs capital where it delivers the highest return and durability. The platform helps financial institutions de-risk portfolios and make smarter long-term allocation decisions, delivering the analytical engine for climate resilience.

FROM KELP TO **CONSTRUCTION**

*"The construction industry is under increasing pressure to **reduce embodied carbon.**"*

FOUNDED BY

CHLOE DOESBURG

chloe@seafoammaterials.com

HQ: Vancouver, BC

seafoammaterials.com

SOLUTION DESCRIPTION

Seafoam Materials manufactures carbon-storing building insulation from sustainably harvested seaweed and upcycled waste—giving homebuilders a seamless way to lower embodied carbon in construction.

Building codes, procurement policies, and climate commitments are placing pressure on the construction sector to reduce lifecycle emissions. Seafoam Materials resolves this by delivering a direct product swap for traditional mineral wool insulation at price, performance, and installation parity. By replacing standard batt and board insulation in a home's exterior walls, builders can reduce the overall embodied carbon of an entire home without altering existing construction workflows, budgets, or trades.

A preliminary life cycle assessment indicates that Seafoam's cavity batt insulation achieves a 69% reduction in cradle-to-gate emissions compared to mineral wool. When accounting for biogenic carbon storage, the product delivers a net reduction of 1.8 kg CO_2e per square foot. Their plastic-free formula also keeps microplastics out of construction waste and protects installers from formaldehyde exposure.

Seafoam is building an Indigenous-led seaweed supply chain by partnering with local, Indigenous-affiliated suppliers across BC. By creating steady commercial demand for domestic kelp and forestry by-products, they are proving that high-performance manufacturing can be both circular and locally sourced.

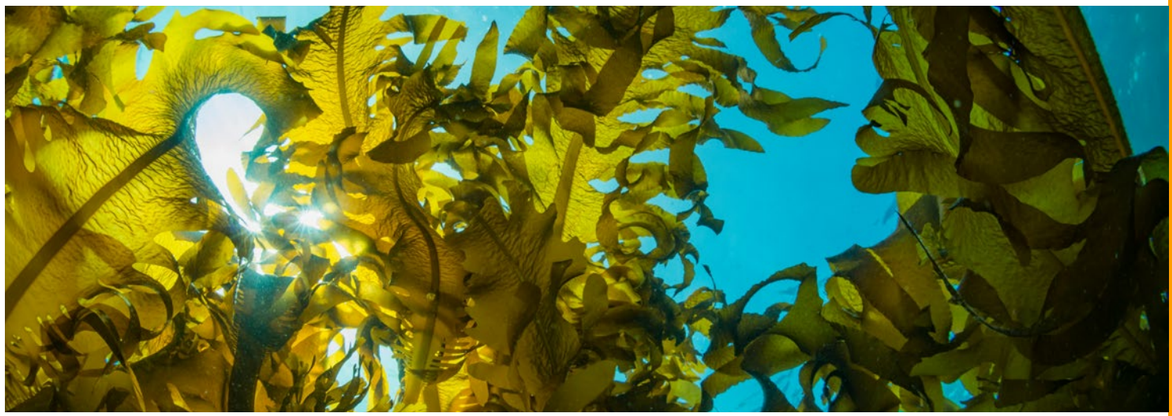
IMPACT
Environmental & Productivity Potential

278,000 tCO_2e
projected annual emissions reductions

69%
reduction in cradle-to-gate emissions







BC COMPANY



DECARBONIZING AT 35,000 FEET

*"We make Sustainable Aviation Fuel from wood, bringing **the highest security of supply**, to airlines and airports, at 90% less emissions than leading incumbents."*

SOLUTION DESCRIPTION

SUSTAERO produces drop-in Sustainable Aviation Fuel (SAF) from regional wood waste, offering airlines and airports a domestic alternative to conventional Jet-A. Using its proprietary SOAR™ (Syngas Optimization for Aviation Renewables) process—which integrates the world's only TRL-9 wood gasification technology with Canadian hydroelectricity—the company delivers certified fuel that is 75% eSAF. This pathway achieves an ultra-low carbon intensity of just 8.79 gCO_2e/MJ (a 90% lifecycle emissions reduction) and guarantees maximum security of supply through simple, sustainable, and uninterruptible supply chains—all without requiring aircraft or airport fueling modifications.

Aviation must decarbonize rapidly as international regulations enforce strict SAF blending mandates. SUSTAERO addresses this supply shortfall by retrofitting shuttered pulp and paper mills, tapping directly into built-in power, water, and timber infrastructure. This site-reuse strategy lowers capital costs and revives rural industrial centers. Partnering with First Nations and local forestry communities, each facility creates roughly 90 direct jobs and restores the tax base in resource-dependent regions.

Uniting forestry, bioenergy, and aviation, SUSTAERO is transforming local liabilities into strategic export commodities. Supported by a planned billion-litre production pipeline, the company's commercial-scale model positions Canada for long-term leadership in the multi-billion-dollar global SAF market.

FOUNDED BY

KEITH GILLARD

kgillard@SUSTAERO.ca

HQ: Burnaby, BC

SUSTAERO.ca

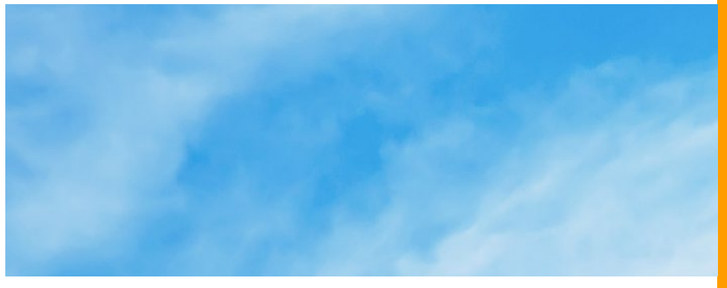
IMPACT

Environmental & Productivity Potential

90% Lower Carbon Intensity
Certified SAF at 8.79 gCO_2e/MJ with 75% eSAF content using TRL-9 wood gasification.

1 Billion Litres
Planned production pipeline retrofitting shuttered mill sites to secure domestic supply.

90 Direct Jobs
Generated per facility, revitalizing local tax bases in partnership with First Nations and forestry communities.



UNLOCKING EARTH'S **DEEP POTENTIAL**

IMPACT
Environmental & Productivity Potential

UP TO 85%
reduction in levelized cost of electricity

98%
increase in accessible geothermal energy

*"The result is energy that is **scalable, clean, and available 24/7.**"*

SOLUTION DESCRIPTION

TerraFerno Geothermal Solutions unlocks the world's deepest geothermal resources, transforming an abundant but historically inaccessible energy source into a commercially viable asset. While geothermal heat exists globally, conventional technology leaves 98% of it out of reach. TerraFerno solves this with patent-pending completion and flow-control technologies built for extreme subsurface environments up to 500°C.

By maximizing heat extraction and reservoir fluid flow, the platform enables continuous, zero-emission baseload power while cutting the levelized cost of electricity by up to 85%.

As global power demand accelerates, TerraFerno provides the continuous output needed to stabilize grids, power critical infrastructure, and supply urban and remote communities. Maximizing energy recovery per well slashes the required drilling footprint, directly reducing land use, material consumption, and environmental disruption.

TerraFerno bridges legacy energy expertise with clean-tech growth by repurposing the workforce, supply chains, and equipment of the oil and gas sector. This pivot preserves high-value industrial jobs while scaling deep geothermal for electricity generation, district heating, and industrial thermal energy.

By removing the primary economic barriers to deep geothermal, TerraFerno delivers scalable, 24/7 carbon-free power to the global grid.







FOUNDED BY

IAIN HOLLAN
ihollan@terraferno.com
HQ: Calgary, AB
terraferno.com



IMPACT

Environmental & Productivity Potential

89%

emissions reduction compared to traditional steam methane reforming

0 gal

of process water consumed during hydrogen generation

100%

on-site production capability, removing long-distance hydrogen transport and pipeline infrastructure costs

FOUNDED BY

DR. OMAR E HERRERA
omar.herrera@vulcanx.ca
HQ: Vancouver, BC
vulcanx.ca

BC COMPANY

NEXT-GENERATION INDUSTRIAL HYDROGEN

*"While most hydrogen companies treat carbon as a waste stream, we convert it into **high-value materials.**"*

SOLUTION DESCRIPTION

VulcanX Energy empowers the energy transition by producing low-cost, low-emission hydrogen and solid carbon through a proprietary reactor platform. While conventional production releases carbon into the atmosphere, VulcanX uses advanced methane pyrolysis in a molten-metal reactor to capture carbon as high-purity solid materials, including battery-grade crystalline graphite and performance-enhancing concrete additives. This dual-revenue model delivers clean hydrogen to energy markets at significantly lower costs than steam methane reforming while supplying premium materials to manufacturers.

Decarbonizing industrial operations is essential to meeting global emissions targets. Traditional steam methane reforming generates heavy greenhouse gas emissions and consumes massive volumes of freshwater. VulcanX mitigates these impacts by operating with zero process water and achieving up to an 89% reduction in lifecycle emissions at commercial scale. When utilizing renewable natural gas, the system can even achieve negative emissions. A singl

A 10-tonne-per-day commercial facility will avoid 36,000 tonnes of CO_2e and save 40,000 cubic metres of freshwater annually. This shift supports a practical transition for energy communities across Alberta and Canada, preserving skilled industrial jobs in the natural gas and manufacturing sectors while improving local air quality by eliminating combustion-related pollutants.

VulcanX's modular reactors deploy directly at customer sites, providing heavy industry with zero-emission fuel without the cost and complexity of long-distance hydrogen transport.
By securing domestic supply chains for critical minerals and deploying directly alongside existing infrastructure, VulcanX enables immediate, scalable decarbonization for heavy industry.

BC COMPANY

UNLOCKING AI INFRASTRUCTURE

WITH NEAR-ZERO-WATER THERMAL STORAGE

IMPACT
Environmental & Productivity Potential

UP TO 95%
reduction in water use, saving 12.8M litres per 1 MW annually

UP TO 80%
less cooling energy required

SOLUTION DESCRIPTION

Wafr Technologies manufactures thermal-battery cooling systems that eliminate energy and water bottlenecks for high-density AI and data centre infrastructure.

As artificial intelligence workloads scale, physical data centre infrastructure faces severe heat and resource constraints. Conventional mechanical and evaporative cooling systems consume up to 40% of a facility's electricity and nearly all of its water. Wafr Technologies resolves this bottleneck by replacing real-time chillers with an advanced thermal-battery platform.

Rather than running energy-intensive chillers continuously, Wafr leverages temperature gradients to store thermal energy and deploy targeted cooling on demand. The technology functions as a drop-in retrofit for operating facilities with zero downtime and integrates directly into new hyperscale builds. By cutting cooling energy consumption by up to 80% and water use by 95%, Wafr provides operators with an immediate path to lower operating costs and higher power density.

This near-zero-water architecture addresses mounting grid capacity shortages and municipal water restrictions across North America. On a 100-megawatt campus, Wafr achieves a target Power Usage Effectiveness (PUE) of 1.05 to 1.15, avoiding up to 370,500 megawatt-hours of electricity, 1.28 billion litres of cooling water, and 159,400 tonnes of CO_2e annually. An integrated, audit-ready tracking system validates avoided grid power to ensure greenhouse gas reductions meet corporate reporting standards.

Eliminating high water consumption also solves a primary permitting hurdle that currently delays or cancels billions of dollars in data centre developments Wafr allows rural and Indigenous communities to host computing infrastructure without risking local watersheds, securing municipal tax bases, construction investment, and long-term operating jobs without compromising regional water security.

> *"AI is being bottlenecked by heat...**Wafr breaks that bottleneck."***

FOUNDED BY

BIKRAM SINGH,
DARRELL KOPKE

bikram.singh@wafr.ca

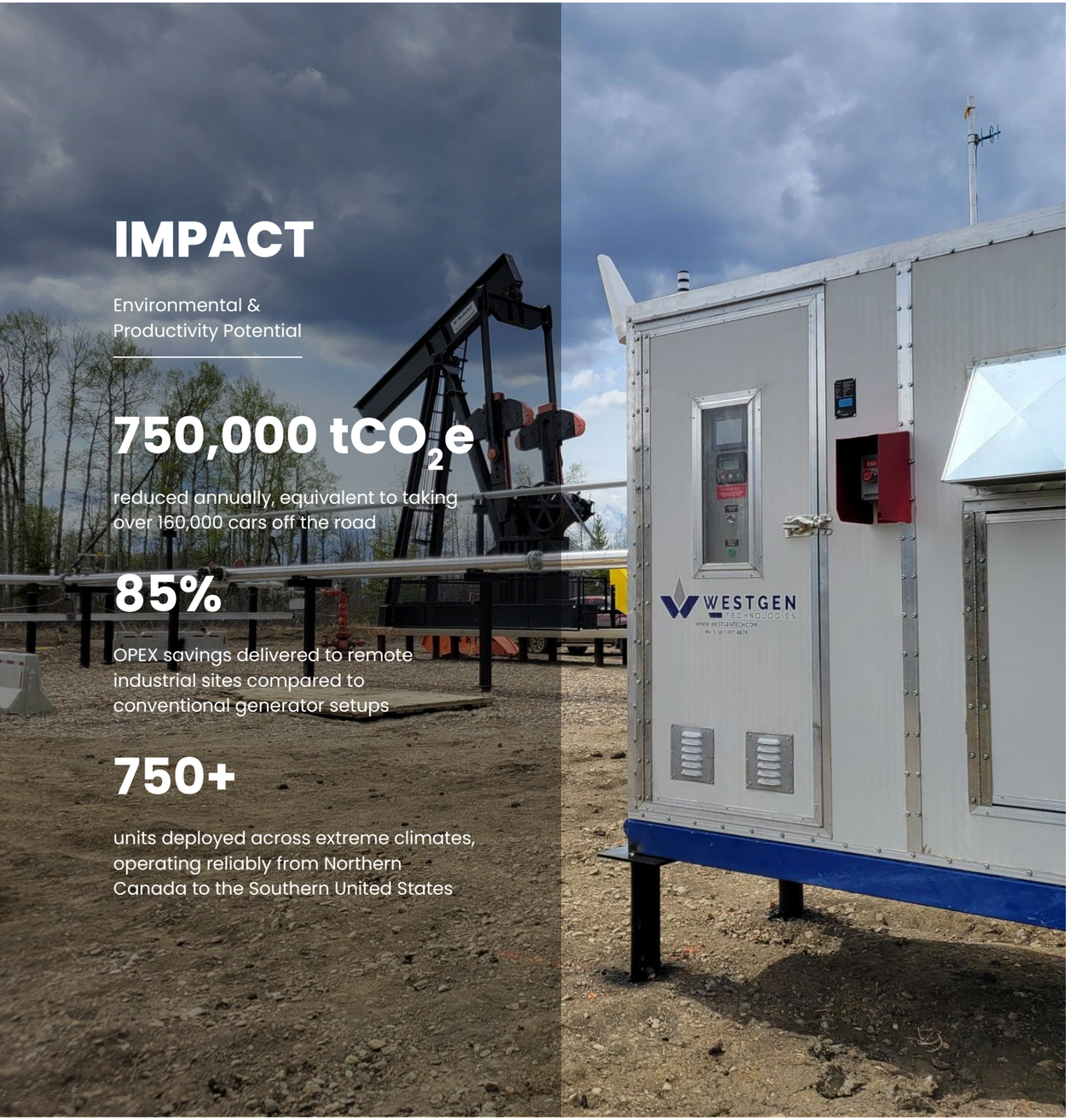
HQ: Vancouver, BC

wafr.ca









IMPACT

Environmental & Productivity Potential

750,000 tCO_2e

reduced annually, equivalent to taking over 160,000 cars off the road

85%

OPEX savings delivered to remote industrial sites compared to conventional generator setups

750+

units deployed across extreme climates, operating reliably from Northern Canada to the Southern United States

OFF-GRID POWER. **ON-TARGET EMISSIONS.**

*"Westgen believes that to address the challenge of global energy scarcity and security, **an 'all of the above' solution must be created.**"*

SOLUTION DESCRIPTION

Westgen Technologies supplies hybrid remote power systems and instrument air packages for off-grid industrial sites across North America.

With over 750 units deployed from Northern Canada to the Southern US, Westgen's proprietary EPOD platform replaces conventional diesel generators and eliminates routine methane venting in remote oil and gas operations.

Addressing global energy security demands practical, immediate reductions in industrial carbon footprints. Westgen meets this challenge by integrating air compression directly into its hybrid power setup, replacing methane-driven pneumatic devices with compressed air. For operators, this removes over 98% of total site emissions, cuts operating expenses by 85%, and extends routine maintenance intervals six-fold.

To date, Westgen's field deployments have eliminated greenhouse gas emissions equivalent to removing over 160,000 cars from the road each year. The platform's modular design also scales beyond resource extraction: the same off-grid hybrid units can deliver reliable, low-emission power to remote communities, microgrids, and off-grid commercial operations currently dependent on legacy diesel.

FOUNDED BY

BEN KLEPACKI
ben.klepackI@westgentech.com
HQ: Calgary, AB
westgentech.com

NATURAL RESOURCES

COMPETITIVE BY NATURE, **SUSTAINABLE BY DESIGN**

Canada's natural resource industries are the engine of our national economy, fueling local communities and global trade. Remaining competitive on the world stage requires de-risking and accelerating clean technology adoption across carbon management, mining, and the broader bioeconomy.

The innovations featured in this section drive industrial decarbonization and resource efficiency—ensuring Canada's foundational industries remain resilient, profitable, and sustainable.

BIOECONOMY

Sustainable forest-biomass conversion and wood-based alternatives to petroleum products that strengthen forest resilience, advance a circular economy, and capture high-value market opportunities.

CARBON MANAGEMENT

High-performance carbon capture, utilization, and removal technologies that accelerate the path to net zero by lowering emissions intensity across heavy industry while protecting the bottom line.

MINING

Decarbonization technologies, waste management solutions, and low-energy extraction processes designed to responsibly scale Canada's critical mineral supply for the global clean transition.



IMPACT

Environmental &
Productivity Potential

Permanent Carbon Removal
Locks atmospheric CO_2 into solid rock for over 10,000 years, with zero reversal risk.

Mine Waste Reduction
Transforms hazardous legacy mine tailings, including asbestos-bearing waste, into a source of environmental value.

Critical Mineral Recovery
Recovers high-value nickel from the same tailings stream, creating value from material traditionally treated as a long-term liability.

> *"Arca's technology delivers permanent carbon dioxide removal: atmospheric CO_2 is locked into solid rock for over 10,000 years, with no reversal risk—* ***the most durable form of carbon removal available."***

BC COMPANY

ROCK SOLID

VERIFIED CARBON REMOVAL

SOLUTION DESCRIPTION

Arca Climate Technologies transforms hazardous industrial mine waste into permanent atmospheric carbon removal and recovered critical minerals.

Mining operations worldwide generate billions of tonnes of alkaline waste tailings, which are traditionally managed as costly long-term liabilities and public safety risks. Arca addresses this challenge using its patented microwave Mineral Activation technology to accelerate natural carbon mineralization, reacting atmospheric CO_2 with waste rock to lock carbon into solid mineral structures permanently. Arca's process extracts high-value nickel from the same tailings stream, creating a valuable resource stream.

Durable, verifiable carbon removal is urgently needed to meet global net-zero targets and reverse industrial warming. Arca's technology locks CO_2 into solid rock for over 10,000 years with zero reversal risk, representing the most permanent form of carbon removal available today. Arca completed the world's first carbon mineralization project at an operating mine with BHP in 2025, delivering third-party verified removals to its first customers under an ISO-validated measurement methodology. Arca's technology neutralizes dangerous legacy mine waste, including asbestos-bearing tailings, while creating high-skilled green employment and equitable Indigenous partnerships in post-closure mining regions.

With a project pipeline representing millions of tonnes of carbon removal capacity, the company offers heavy industry a path toward net-negative critical mineral production. Arca's proven execution demonstrates how Canadian cleantech can lead the globe in environmental and socially responsible mining.

FOUNDED BY

DR. GREG DIPPLE,
DR. PETER SCHEUREMANN,
BETHANY LADD

sean@arcaclimate.com

HQ: Vancouver, BC

arcaclimate.com





BC COMPANY

FOUNDED BY

SEAN CROWE,
ROBERT GREENE,
SCOTT DUNBAR,
SYNIAD INNOVATIONS

rachel@brokkrresources.com

HQ: Burnaby, BC

brokkrresources.com

"Brokkr harnesses naturally occurring bacteria to produce nickel, cobalt, manganese, copper, and rare earths ***from sources conventional technology cannot economically process."***

IMPACT
Environmental & Productivity Potential

17–27 tCO_2e
less GHG emissions per tonne of nickel

47–88 MWh
less energy required per tonne of nickel produced

MICROBES MEET METAL

SOLUTION DESCRIPTION

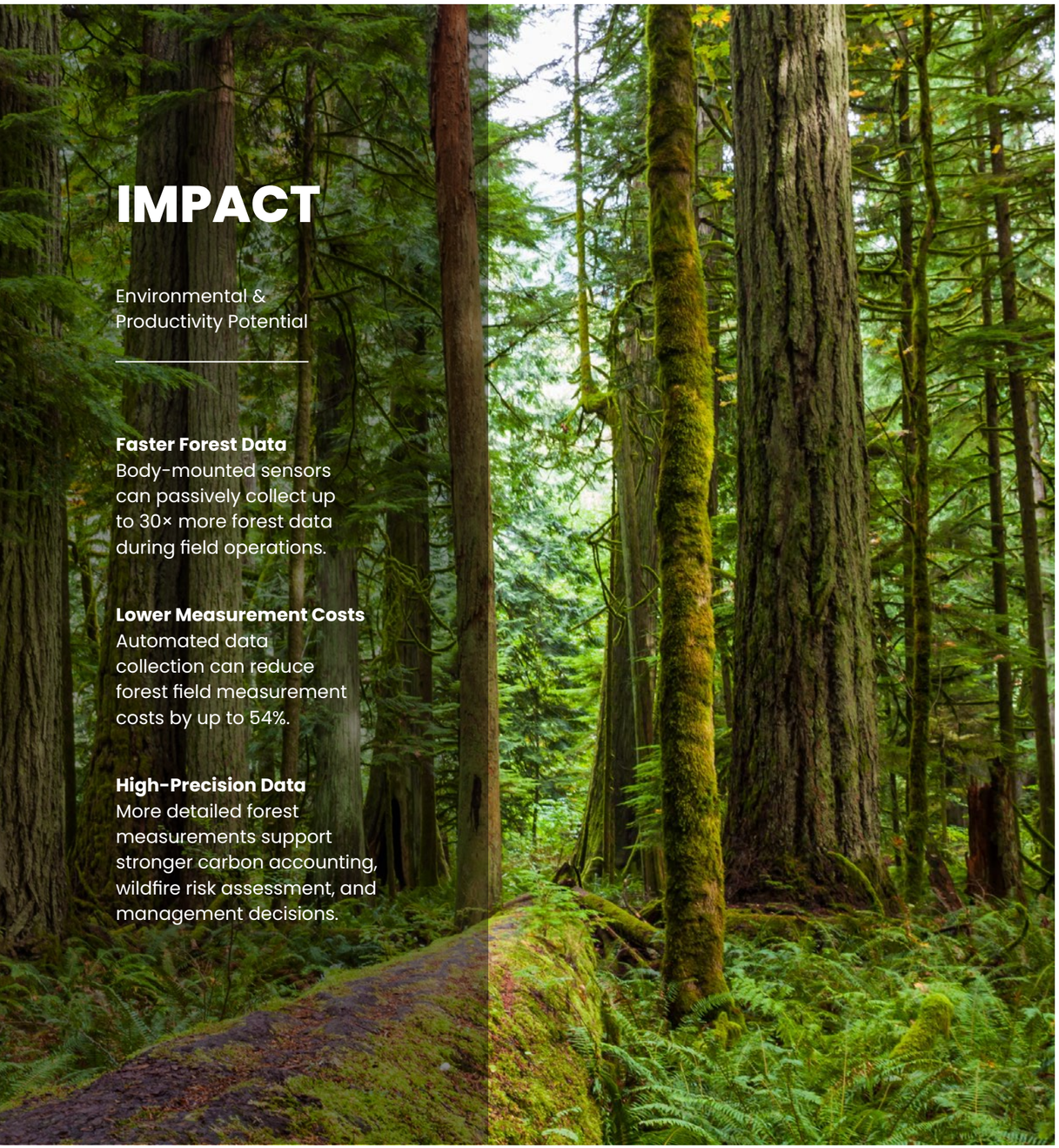
Brokkr Mineral Resources Corp harnesses naturally occurring bacteria to extract and refine high-purity nickel, cobalt, manganese, copper, and rare earth elements from low-grade ores and industrial waste streams.

The global adoption of clean energy resources is threatened by scarce critical mineral supplies, environmentally destructive processing methods, and heavy reliance on foreign refining. Brokkr's proprietary bio-hydrometallurgical circuit harnesses naturally occurring bacteria to produce nickel, cobalt, manganese, copper, and rare earths at lower cost, lower emissions, and lower risk. The process operates at ambient temperature and pressure. Through bypassing energy-intensive autoclaves and toxic chemical reagents, Brokkr supplies secure, traceable, battery-grade metals to defence and battery supply chains at less than half the capital cost of incumbent technologies.

Traditional critical mineral refining, such as High-Pressure Acid Leaching (HPAL), generates massive GHG emissions and toxic acid tailings. Brokkr's technology reduces emissions to under 6 tCO_2e per tonne of nickel while cutting energy intensity by up to 88%. The process generates zero acid tailings, producing inert, non-hazardous residues suitable for reuse as supplementary cementitious materials.

Brokkr's modular platform allows mining communities to process ore locally rather than exporting raw resources, retaining economic value and eliminating long-term toxic liabilities for host regions.

Brokkr Mineral Resources is transforming the critical minerals supply chain by offering a clean, low-cost refining alternative that outperforms traditional metallurgy in any jurisdiction. By unlocking economic value from previously unviable low-grade ores and waste streams, Brokkr establishes a resilient, domestic supply of essential battery metals, positioning Canada as a low-carbon leader in global critical mineral extraction.



IMPACT

Environmental & Productivity Potential

Faster Forest Data
Body-mounted sensors can passively collect up to 30× more forest data during field operations.

Lower Measurement Costs
Automated data collection can reduce forest field measurement costs by up to 54%.

High-Precision Data
More detailed forest measurements support stronger carbon accounting, wildfire risk assessment, and management decisions.

BC COMPANY

SMARTER FORESTRY

WITH EVERY STEP

SOLUTION DESCRIPTION

Bullfinch Earth provides an AI-powered forest inventory sensor platform deployed directly on field personnel to generate autonomous, high-precision ground-truth data for natural environments.

Forestry operators, carbon registries, and wildfire insurers historically rely on manual sampling and inaccurate inventory estimates, leading to costly management errors and carbon project failures. Bullfinch solves this by deploying body-mounted sensors that passively collect 30 times more forest data while personnel walk through the field. This platform reduces field measurement costs by 54% and delivers the empirical data needed to price wildfire risks and accurately certify carbon credits.

Accurate forest data is essential to safeguard global timber resources, prevent catastrophic wildfires, and restore trust in nature-based carbon markets. Unreliable inventory data has caused the decertification of carbon credits and left homes in wildfire zones uninsurable. Bullfinch estimates that forests managed with its precision data can store more CO_2e through optimized silviculture and enhanced fire resilience. Bullfinch also empowers rural and Indigenous forestry workers by providing productivity-enhancing technology, partnering with First Nations to support environmental data sovereignty over traditional territories.

Bullfinch is future-proofing Canada's forest protection by supplying the foundational data required for sustainable harvesting, insurance markets, and carbon registries, creating the economic mechanisms needed to protect forest resources.

> *"**The source of ground truth for forests**, replacing the guesswork plaguing forestry, wildfire risk, and carbon credits."*

FOUNDED BY

SETH STERNBERG,
GRAHAM SMITH,
TIM GOODSALL

seth@bullfinch.earth

HQ: Salt Spring Island, BC

bullfinch.earth

LOCKING VALUE

INTO EVERY TONNE

SOLUTION DESCRIPTION

Carbon Lock Tech utilizes patented pyrolytic reactor technology to convert organic waste and biomass into stable, high-value biocarbon products and verified carbon dioxide removal (CDR) credits.

Municipalities and agricultural operators struggle with expanding waste streams, rising landfill costs, and heavy methane emissions from organic decomposition. Carbon Lock Tech addresses this with a scalable build-own-operate model that processes organic waste into functional biocarbon for use in agriculture, concrete, mining, and remediation. This solution offers waste managers and municipalities sustainable waste diversion, permanent carbon sequestration, and new revenue streams at a fraction of the cost of direct air capture.

Diverting organic waste from landfills is a critical lever for curbing global warming, as food and organic waste generate 8% to 10% of global GHG emissions, according to UNFCCC. Each tonne of biocarbon produced permanently sequesters carbon for centuries while preventing landfill methane formation. Applied in agriculture, biocarbon reduces nitrous oxide emissions and fertilizer dependency, while in construction, a 3.5% addition reduces concrete's carbon footprint by up to 50%. Carbon Lock Tech also creates local cleantech jobs and actively collaborates with First Nations on biomass supply chains and youth workforce development.

> *"We convert biomass and organic waste into **stable, patented biocarbon products and verified carbon dioxide removal credits.**"*

Carbon Lock is advancing municipal waste infrastructure by converting environmental waste burdens into long-term carbon sinks and industrial inputs. With biochar driving nearly 89% of global durable carbon removal credits, Carbon Lock Tech positions Canada as a leader in the rapidly expanding global carbon removal market.

IMPACT

Environmental & Productivity Potential

Permanent Carbon Removal
Converting organic waste into stable biocarbon, permanently locking carbon away for centuries.

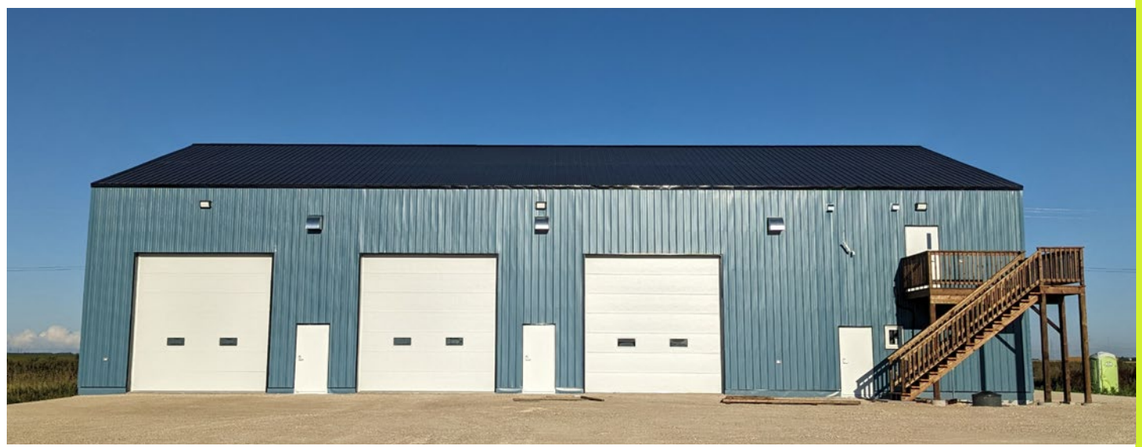
Waste-to-Value
Transforming organic waste into valuable biocarbon while preventing landfill methane emissions.

FOUNDED BY

KEVIN DANNER
kdanner@carbonlocktech.com
HQ: Headingley, MB
carbonlocktech.com







CarbonRun



CARBON REMOVAL RUNS DEEP

> *CarbonRun is scaling a carbon removal solution that is **safe, verifiable, and deployable at global scale.** ”*

SOLUTION DESCRIPTION

CarbonRun restores acid-degraded rivers and permanently removes atmospheric carbon dioxide through its science-based River Alkalinity Enhancement (RAE) technology.

Global carbon removal targets require gigatonnes of durable abatement annually, yet many emerging technologies demand massive land, heavy infrastructure, or energy footprint. CarbonRun deploys crushed limestone into acidified river systems, restoring natural geochemistry and converting atmospheric CO_2 into aqueous bicarbonate that remains safely stored in the ocean for over 1,000 years. Backed by 30 years of watershed research and $30M in pre-sold contracts, CarbonRun delivers instant, observable carbon removal at low cost.

Restoring river chemistry provides immediate ecological and climate benefits with minimal operational emissions, operating at a highly efficient 5:100 emissions-to-removal ratio. By reversing decades of damage from acid rain, CarbonRun's limestone applications restore pH balances, recovering habitat for salmon, aquatic insects, and biodiversity. Operating in regions where salmon fishing is central to Indigenous and rural heritage, CarbonRun collaborates closely with local communities through education programs and transparent stakeholder governance.

CarbonRun is harnessing natural geochemical cycles to deliver ocean storage alongside tangible ecosystem restoration. Built on Canadian intellectual property developed at Dalhousie University, CarbonRun's RAE platform establishes an international benchmark for verifiable, high-efficiency marine carbon removal and watershed restoration.

FOUNDED BY

LUKE CONNELL,
DR. SHANNON STERLING,
DR. EDMUND HALFYARD

shannon@carbonrun.io

HQ: Dartmouth, NS

carbonrun.io

IMPACT

Environmental & Productivity Potential

5:100
emissions-to-removal ratio delivers highly efficient carbon removal with minimal operational emissions.

1,000+
years of atmospheric carbon converted into bicarbonate remains safely stored in the ocean.

300%
increase in Atlantic salmon populations at CarbonRun project sites in Nova Scotia.



CARBONYX

BC COMPANY

FROM INDUSTRIAL **WASTE TO WORTH**

IMPACT
Environmental & Productivity Potential

10,000+
years of carbon locked permanently into stable solid minerals.

1,000,000+
tonnes of CO_2 permanently removed at scale.

SOLUTION DESCRIPTION

Carbonyx builds modular electrochemical reactors that permanently capture atmospheric CO_2 while transforming industrial waste into valuable products.

Industrial manufacturers generate billions of tonnes of alkaline waste—including concrete waste, slag, and mine tailings—that are traditionally landfilled. However, these materials have an inherent capability to absorb carbon dioxide. Carbonyx unlocks this untapped resource by reacting alkaline waste with captured CO_2 to produce stable, high-value carbonates, silica, and recovered critical minerals. This enables industrial material buyers to lower raw material costs while drastically reducing their lifecycle carbon emissions.

Repurposing industrial waste into durable carbon storage solves a massive global waste liability while accelerating permanent atmospheric carbon removal. Carbonyx's process locks carbon into solid minerals for over 10,000 years, eliminating reversal risk and displacing the carbon-intensive extraction of virgin materials. Its first-of-a-kind commercial facility will permanently remove CO_2 while demonstrating a new pathway to convert alkaline waste into durable carbon storage and valuable products.

Carbonyx is establishing a circular manufacturing framework that decouples industrial growth from extractive mining and carbon emissions. Unlike direct air capture business models reliant solely on carbon credit policy, Carbonyx generates multiple commercial revenue streams from recovered industrial feedstocks. This scalable, waste-valorizing technology positions Carbonyx and Canada's industrial cleantech sector for long-term international leadership in advanced mineral processing and durable carbon abatement.

> *"Our technology creates **multiple revenue streams** from a single process."*

FOUNDED BY

DOUGLAS PIMLOTT,
MIA STANKOVIC,
ADRIEN NOBLE,
CURTIS BERLINGUETTE

douglas@carbonyx.com

HQ: Vancouver, BC

carbonyx.com







CAPTURE ON TAP

"CO2Brew's carbon capture systems ***allow brewers to become self sufficient with*** CO_2 *eliminating the need to purchase* CO_2 ***and improving their sustainability.****"*

SOLUTION DESCRIPTION

CO2Brew's compact carbon capture units capture fermented CO_2 normally vented by craft breweries and refine it to beverage-grade for reuse.

Commercial breweries, wineries, and distilleries generate concentrated CO_2 during fermentation but must purchase and transport expensive beverage-grade commercial CO_2 gas to carbonate and purge their products. CO2Brew eliminates this supply chain dependency through an accessible equipment leasing model that requires zero upfront capital. By capturing onsite fermentation emissions, CO2Brew allows beverage producers to achieve CO_2 self-sufficiency, lower operating expenses, and shield themselves from industrial gas supply shortages.

Purchasing bulk commercial CO_2 carries a higher lifecycle carbon footprint of capturing and reusing CO_2 onsite. Decentralizing industrial gas supply eliminates unnecessary trucking emissions and mitigates commercial carbon releases. CO2Brew estimates that roughly 80% of breweries can become self-sufficient with CO_2, providing small-business craft brewers with immediate cost relief to support operational sustainability.

CO2Brew is transforming food and beverage manufacturing sustainability by introducing carbon reuse into production. While initially targeting the brewing industry, CO2Brew's technology is easily adapted to distilleries, wineries, food processing, and DAC facilities. This practical solution showcases Canadian innovation in distributed carbon capture, reinforcing Canada's position as a world leader in CCUS technology development and deployment.

FOUNDED BY

KENT SWANLUND

kent.swanlund@co2brew.com

HQ: Calgary, AB

co2brew.com

IMPACT

Environmental & Productivity Potential

Onsite Carbon Reuse
Units capture fermentation CO_2 and refine it to beverage-grade quality for onsite reuse.

CO_2 Self-Sufficiency
An estimated 80% of breweries could become CO_2 self-sufficient through onsite capture and reuse.

Lower-Carbon Supply
Reduces transportation needs and associated emissions.





CLEANER CHEMISTRY

“By enabling a shift to sustainable, locally sourced inputs, COROL ***supports industrial decarbonization and more resilient supply chains.“***

SOLUTION DESCRIPTION

COROL develops high-performance, 100% bio-based polyols derived from locally sourced Canadian canola and flax, enabling chemical manufacturers to decarbonize industrial polyurethanes.

Global manufacturers of coatings, adhesives, sealants, and insulation rely heavily on petroleum-derived polyols, exposing their supply chains to fossil fuel volatility and high lifecycle GHG emissions. COROL solves this by delivering bio-based polyols that directly replace petroleum and imported castor oil inputs without compromising product durability or performance. This bio-based alternative provides industrial partners with immediate carbon reductions and enhanced domestic supply chain resilience.

IMPACT

Environmental & Productivity Potential

By reducing reliance on fossil-based inputs, COROL’s technology can lower value-chain emissions across polyurethane-dependent industries, **supporting broader manufacturing decarbonization and net-zero goals.**



Decarbonizing industrial chemistry is crucial to achieving broader manufacturing net-zero goals. COROL’s agricultural feedstocks absorb CO_2 during growth, producing a polyol with a lower carbon footprint compared to conventional petroleum formulations. Replacing fossil inputs across the $29 billion global polyols market can therefore reduce value-chain emissions across many sectors that utilize polyurethanes, such as construction, coatings, and adhesives.

By establishing local bio-refining supply chains, COROL insulates North American manufacturers from foreign supply shocks, volatile shipping costs and supports local agricultural economies. COROL’s bio-based polyols are helping decarbonize and build resilience in Canadian manufacturing supply chains.

FOUNDED BY

CYNTHIA ENE,
JONATHAN CURTIS,
TOLIBJON OMONOV,
EREDDAD KHARRAZ

cynthiae@corol.org

HQ: Edmonton, AB

corol.org





> *We don't just save lives—**we significantly lower fuel consumption and carbon emissions** for the world's most carbon-intensive sectors. "*

FOUNDED BY

SIAMAK AKHLAGHI
siamaka@correct-ai.com
HQ: Edmonton, AB
correct-ai.com

IMPACT

Environmental & Productivity Potential

Across **7M+ monitored exposure hours** and **3,000+ deployed systems globally**, Correct-AI has maintained a **zero-incident safety record for human injuries and machine collisions** while optimizing heavy fleet movement—**reducing fleet idling, cutting machine fuel emissions, and extending equipment lifecycles.**

AI WITH INDUSTRIAL **INSTINCTS**

SOLUTION DESCRIPTION

Correct-AI transforms heavy industrial safety systems into drivers for operational efficiency through its PROX-EYE® AI-powered computer vision and LiDAR platform.

Heavy equipment in mining, construction, and oil and gas sector operations suffer from dangerous driver blind spots and high diesel fuel consumption during idle times. Correct-AI provides edge-computed sensors on heavy machinery to provide 360-degree real-time proximity detection and predictive terrain analytics. The system prevents costly site collisions while simultaneously lowering haul truck fuel consumption by eliminating operator blind spots and optimizing machine movements.

Reducing heavy machinery fuel use directly impacts industrial carbon intensity, as diesel consumption by haul trucks account for 87% of material handling energy in mining. Correct-AI cuts equipment idling and optimizes fleet routing, delivering up to 15-20% fuel savings and cutting site CO_2 emissions. Unplanned machine downtime is reduced by up to 70%, extending hardware operating life. PROX-EYE® also eliminates human error in high-risk zones, drastically reducing workplace injuries while boosting operator job satisfaction and lowering workplace stress.

Correct-AI merges site safety mandates with carbon reduction targets. By deploying lightweight, edge-computed AI directly on machinery rather than relying on energy-intensive data centres, processing is rapid and avoids the associated environmental impact of large-scale AI. Correct-AI's solution demonstrates how Canadian industrial innovation is making heavy industry safer, leaner, and substantially more energy efficient.



FORESTRY 2.0

FOUNDED BY

OWEN MILLER,
ROB UBLEIS,
STEVEN ILLERBRUN

owenmiller@deadwoodinnovations.ca

HQ: Fort St. James, BC

deadwoodinnovations.ca

*"Our feedstock is abundant and low-cost. Our output is **tariff-free, globally marketable, and commands premium pricing."***

SOLUTION DESCRIPTION

Deadwood Innovations transforms low-value, underutilized timber and hardwood species into premium, dimensionally stable engineered wood products for the global building market.

Canada's traditional forestry sector faces declining timber supply, mill closures, and heavy commodity market tariffs. Deadwood addresses these systemic challenges by commercializing the world's first combined wood densification and thermal modification process. Operating directly alongside existing sawmills, Deadwood uses accessible, low-cost aspen and unmerchantable timber to produce tariff-free, high-value structural lumber that outcompetes traditional softwood commodities on price, density, and moisture resistance without requiring premium forest inputs.

Diverting low-grade forest biomass into durable building materials enhances forest resilience and permanently locks up biogenic carbon. Low-grade or unmerchantable timber is traditionally burned in harvest slash piles or utilized for short-life energy pellets, releasing stored carbon into the atmosphere. Deadwood's proprietary process sequesters carbon into long-life structural lumber, achieving a greenhouse gas avoidance of 0.8 tonnes of CO_2e per cubic metre of timber input. The company revitalizes rural forest economies by creating high-value manufacturing jobs, prioritizing local employment and trade apprenticeships for members of the Nak'azdli Whut'en First Nation at its Tl'Oh Upgrader facility.

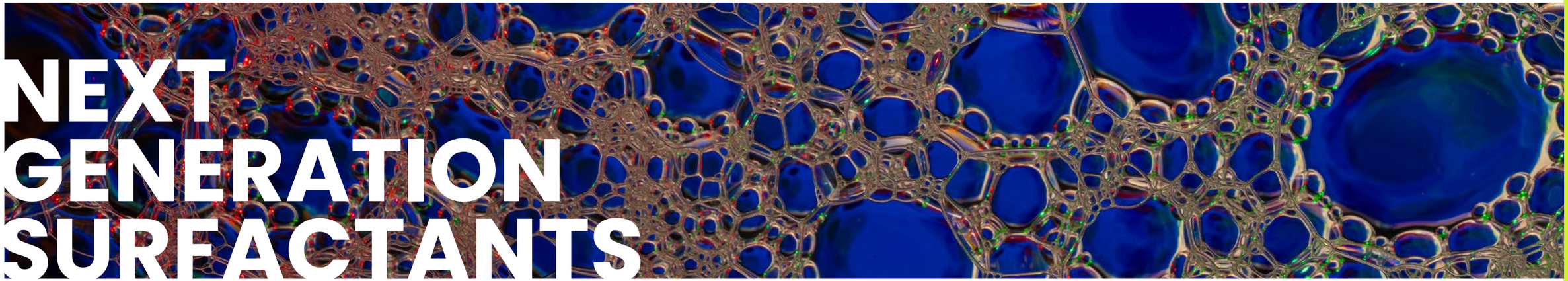
Deadwood Innovations is unlocking hidden economic value from neglected, fast-growing timber species. By enabling conventional sawmills to upgrade cheap biomass into premium structural products, the company boosts mill operating margins while promoting natural forest diversity and regeneration.



IMPACT
Environmental & Productivity Potential

~1 tCO_2e
stored per cubic metre of fibre processed

100%
permanent carbon sequestration



NEXT GENERATION SURFACTANTS

*"We are the first company globally to manufacture biosurfactants **entirely from food waste.**"*

SOLUTION DESCRIPTION

Dispersa converts organic food waste into high-performance, biodegradable biosurfactants, replacing palm and petroleum-based surfactants in everyday commercial products.

Surfactants are essential foaming and cleaning agents used in soaps, detergents, personal care products, and industrial cleaners, but traditional production relies on petroleum and palm oil linked to tropical deforestation. Dispersa uses a proprietary waste-valorization process that transforms ethically recovered local food waste into natural biosurfactants. This circular alternative provides consumer goods manufacturers with an affordable, palm-free, and sulfate-free formulation that matches conventional chemical performance without premium costs.

Replacing synthetic surfactants eliminates toxic chemical pollution while reducing municipal organic waste volumes. Dispersa's bio-based ingredients are completely non-toxic, 1,4-dioxane-free, and rapidly biodegrade, preventing persistent toxic chemical accumulation in aquatic ecosystems. By upcycling food waste into chemical inputs, the company lowers product carbon footprints and diverts organic mass from municipal landfills.

Dispersa advances urban circularity and responsible consumption while supporting local waste diversion networks and cleaner household chemical safety for consumers.

Dispersa is modernizing the specialty chemical industry by demonstrating that eco-friendly ingredients can achieve performance and price parity with synthetic incumbents. By establishing local biomanufacturing hubs that run on regional food waste, Dispersa reduces corporate vulnerability to foreign palm oil and petroleum supply chains and advances Canada's circular bioeconomy development and leadership.

FOUNDED BY

NIVATHA BALENDRA
nivatha@dispersa.ca
HQ: Laval, QC
dispersa.ca

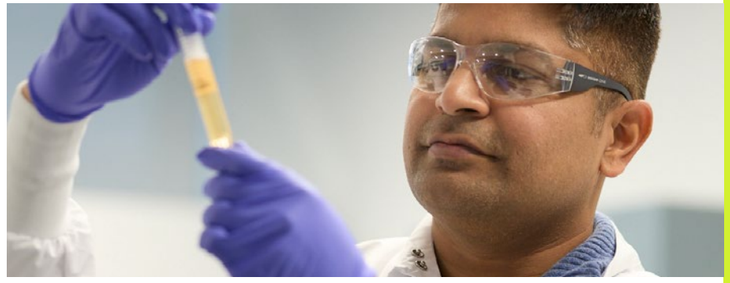
IMPACT

Environmental & Productivity Potential

PuraSurf™M delivers a **five-times-greener carbon footprint** than conventional ethoxylates, without compromising affordability or performance.

Dispersa is **the first company globally to manufacture biosurfactants entirely from food waste**, replacing reliance on virgin-grade palm- and petroleum-derived feedstocks.

At commercial scale, PuraSurf™M is expected to eliminate nearly **one million tonnes of CO_2 equivalents.**





RE DEFINING CRITICAL MINERALS

*"Our technology can **cost effectively transform** natural flake graphite, recycled end of life battery graphite and gigafactory production scrap **into battery grade graphite.**"*

FOUNDED BY

GILLIAN HOLCROFT,
KEVIN WATSON

gillian@greengraphitetech.com

HQ: Montreal, QC

greengraphitetech.com

SOLUTION DESCRIPTION

Green Graphite Technologies (GGT) commercializes patented processing technology to supply high-performance, battery-grade graphite, directly addressing the critical bottleneck in secure, domestic battery supply chains. As global demand for energy storage outpaces reliable supply, GGT provides a cost-effective solution that transforms natural flake graphite, recycled end-of-life battery materials, and gigafactory production scrap into premium inputs. Proven at the pilot scale, GGT's purification platform significantly outperforms incumbent commercial methods. The company delivers a highly competitive value proposition: driving down operating costs by 55% compared to existing technologies while integrating diverse feedstocks to derisk regional supply for electric vehicle, stationary storage, and military applications.

Securing a sustainable supply of battery components is an urgent strategic priority as global markets accelerate toward electrification. Currently, graphite processing relies heavily on chemical-intensive methods that create severe ecological liabilities. GGT directly mitigates this vulnerability with an advanced process utilizing 99% less water and dramatically reducing waste generation. Crucially, the technology achieves an 82% lower carbon footprint than traditional Chinese hydrofluoric acid methods. Beyond these robust environmental metrics, GGT drives tangible social impact by strengthening Canada's critical minerals economy. The company's forthcoming pre-commercial facility is expected to create 30 full-time equivalent (FTE) jobs during construction and 20 FTE roles during operations, generating broad indirect benefits for domestic contractors, analytical laboratories, and industrial logistics providers.



Establishing localized capabilities for both primary processing and material recycling, GGT empowers the automotive and energy sectors to meet aggressive net-zero transitions with commercially viable, secure supply lines. The firm is currently raising a $15 million CAD round to fund its 125 kg/hr pre-commercial facility, targeting its first fully operational commercial plant by 2029. By delivering a scalable, economically superior alternative to legacy processing methods, GGT positions itself—and Canada's clean economy—for long-term leadership in the rapidly expanding global market for advanced battery materials.

IMPACT
Environmental & Productivity Potential

82%
lower carbon footprint than traditional methods

55%
lower operating costs compared with existing technologies

BC COMPANY

TRANSFORMING WASTE

INTO STRATEGIC SUPPLY

*"Green Manganese is building the **next generation of critical mineral processing.**"*

SOLUTION DESCRIPTION

Green Manganese Technologies Inc. develops low-carbon critical mineral processing technology to enable the sustainable, onshore production of manganese from mine waste, low-grade ores, and industrial residues. By addressing a critical vulnerability in North America's industrial supply chain, the company converts overlooked tailings into high-value inputs while reducing dependence on imported refined materials. Using a proprietary closed-loop process, Green Manganese supplies steelmakers with low-carbon manganese pellets at competitive commodity-market pricing. This platform delivers up to 80% lower carbon dioxide emissions and five times lower energy consumption compared to conventional manganese production, giving steelmakers a commercially viable mechanism to reduce Scope 3 emissions and strengthen supply chain resilience.

Establishing secure, regional access to critical minerals is an urgent priority for future industrial supply chains and achieving net-zero goals. Green Manganese directly addresses this challenge by transforming legacy mine waste and industrial by-products into strategic resources, significantly reducing the necessity for new extractive mining operations. At commercial scale, a single 15,000-tonne-per-year facility is projected to avoid up to 55,000 tonnes of carbon dioxide annually while minimizing waste output. Beyond these environmental gains, the company generates meaningful social value by remediating historical tailings sites and creating 20 to 50 direct, high-skilled jobs per facility, alongside supporting localized employment across construction, operations, logistics, and regional supply chains in traditional mining communities.

Operating at the intersection of metallurgy and cleantech innovation, Green Manganese is positioning itself to reshape how strategic metals are sourced and refined for heavy industry. By establishing domestic mid-stream processing for manganese, the company provides North American steelmakers and manufacturers with a dependable, low-emissions alternative to volatile foreign supply channels. This closed-loop approach not only lowers the carbon footprint of structural materials but also revitalizes legacy industrial sites across mining regions. As global demand for sustainably processed critical minerals accelerates, Green Manganese's scalable model reinforces North American manufacturing competitiveness while positioning Canada's clean economy for enduring leadership in sustainable resource processing.

IMPACT
Environmental & Productivity Potential

UP TO 99.9%
reduction in PAH-related contaminants

72,000–120,000
tonnes of potential manganese recovered

6x
lower CO_2 emissions and energy consumption

FOUNDED BY

ALEXEY DEMYKIN, IGOR SELIVANOV, MARIA POLTORAK
alexey@greenmanganese.com
HQ: Delta, BC
greenmanganese.com









IMPACT

Environmental & Productivity Potential

Net Carbon-Negative Solution
Hyperion’s process can achieve up to a 129% reduction in end-to-end GHG emissions.

Permanent Carbon Storage
Upcoming projects estimate capacity to capture 30,000 tonnes of CO_2 per year, and produce 60,000 tonnes of PCC per year.

Circular Manufacturing
Captured CO_2 becomes engineered mineral products that replace carbon-intensive mined inputs, reducing virgin resource extraction and associated lifecycle emissions.

CARBON CAPITAL

FOUNDED BY
HEATHER WARD
heather.ward@hyperionenergy.ca
HQ: Ottawa, ON
hyperionenergy.ca

SOLUTION DESCRIPTION

Hyperion Global Energy Corp. transforms industrial waste carbon dioxide into high-value mineral commodities, turning a major environmental liability into a profitable commercial asset. Designed for hard-to-abate sectors like cement manufacturing, Hyperion’s patented Tandem Carbon Recycling platform is a modular, drop-in system that captures emissions directly at the source and permanently mineralizes them into specification-engineered materials.

By replacing carbon-intensive mined inputs used in concrete, the company provides heavy industry with a cost-competitive decarbonization pathway. Operating with approximately 50% gross margins and a projected payback period under four years, Hyperion eliminates reliance on carbon credits or green premiums, redefining industrial emissions reduction as a profitable manufacturing process.

Decarbonizing heavy industry is an urgent climate priority. Hyperion directly mitigates emissions by locking captured carbon into high-purity industrial feedstocks. An independent life-cycle assessment indicates the company’s process achieves up to a 129% reduction in end-to-end greenhouse gas emissions, yielding a net-carbon-negative material.

Beyond its environmental performance, Hyperion drives circular economic benefits and localized job creation. As a women-led cleantech firm, Hyperion supports high-value engineering and manufacturing roles in rural communities while partnering with national research institutes to advance closed-loop input recovery and material recycling.

Following successful pilot validation at an operating cement plant in Bath, Ontario, Hyperion is establishing a new paradigm for industrial carbon utilization. The company is currently scaling a 10-tonne-per-day demonstration unit ahead of full commercial deployment targeted for 2028–2029, where each commercial system will capture and store 30,000 tonnes of carbon dioxide annually.

By proving that heavy industry can achieve deep decarbonization alongside strong unit economics, Hyperion provides a commercially viable model for low-carbon manufacturing. This Made-in-Canada solution positions Hyperion—and Canada’s clean economy—for global leadership in heavy-industry decarbonization.

BC COMPANY

CLEANING UP COLOUR

FOUNDED BY

ROYA AGHIGHI,
SARAH GRAHAM
roya@lite-1.bio
HQ: Vancouver, BC
lite-1.bio

IMPACT
Environmental & Productivity Potential

1,500B
litres of freshwater targeted for protection by 2030 by replacing polluting synthetic dyes.

28,000
tonnes of methane emissions could be prevented by capturing just 1% of the synthetic dye market.

SOLUTION DESCRIPTION

Lite-1: Microbial Colour Ltd. produces performance-grade microbial colourants that seamlessly integrate into existing manufacturing systems, directly replacing the petroleum-based synthetic dyes used globally since 1856. As regulators phase out these petrochemical inputs, Lite-1 provides a commercially ready, direct-swap alternative.

The company's biotechnology converts biowaste into high-performance colourants—including the industry's first fully clean black dye—for textiles, plastics, food, and cosmetics. Requiring no expensive retrofitting, this platform enables manufacturers to eliminate fossil fuel reliance, lower water treatment costs, and comply with tightening regulations. Scaling an asset-light model, Lite-1 is revenue-generating at the pre-seed stage, backed by eight active global pilots, 12 letters of intent, and $1.8 million CAD in non-dilutive funding.

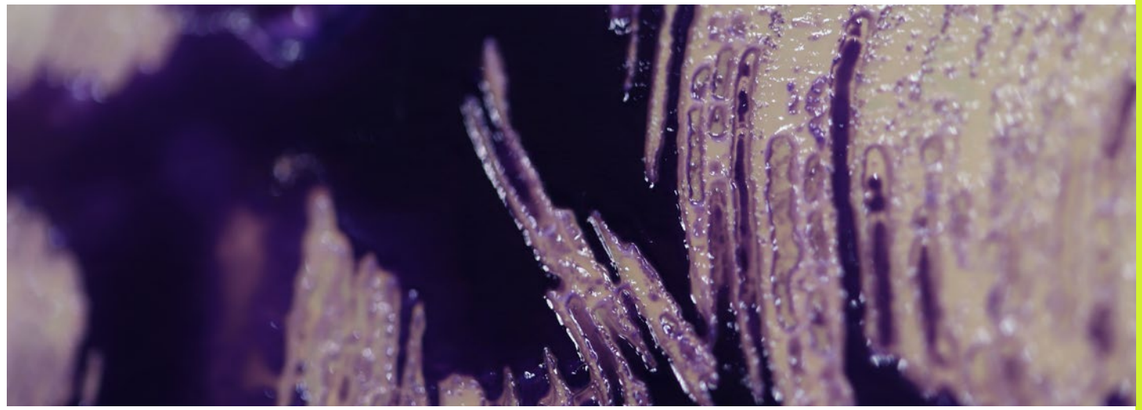
The $90 billion synthetic dye industry is a severe environmental liability, driving 20% of global water pollution. Lite-1 urgently addresses this crisis by eliminating toxic effluents, targeting the protection of over 1,500 billion liters of freshwater by 2030. The company's circular production model also mitigates emissions: capturing just 1% of the market diverts 14,000 tonnes of industrial biowaste and prevents 28,000 tonnes of potent methane emissions. Beyond these environmental metrics, Lite-1 drives meaningful social value. Led by women scientists and an immigrant CEO, the firm champions inclusive economic growth by building a diverse cleantech workforce, where 85% of the team identifies as women, visible minorities, or newcomers to Canada.

While other sustainable alternatives demand costly supply chain overhauls, Lite-1's drop-in technology ensures scalable adoption across multiple industries. This approach insulates brands from volatile oil prices and impending regulatory bans while creating sustainable revenue opportunities. As the company expands its spectrum of colourants and aims to create over 230 clean biotechnology jobs by 2030, Lite-1 proves that commercial viability and sustainability are mutually reinforcing. By transforming biological waste into a premium manufacturing input, Lite-1 positions itself—and Canada's clean economy—for enduring leadership in the global transition toward regenerative industrial production.

> *"Every colour you see—on your clothes, your car, your child's toys—comes from the same petrochemical process invented in 1856.* ***That era is ending.****"*







MANGROVE LITHIUM
Unlocking a battery-powered future

BC COMPANY



A NEW EQUATION

"Our process does not require large volumes of chemical reagents, generates no process waste, and significantly reduces emissions ***while maintaining cost competitiveness.****"*

FOUNDED BY

SAAD DARA

saaddara@mangrovelithium.com

HQ: Delta, BC

mangrovelithium.com

SOLUTION DESCRIPTION

Mangrove Lithium is building the next generation of critical mineral processing through innovative electrochemical technology that refines battery-grade lithium more sustainably, flexibly, and cost-effectively. As the global battery industry demands agile sourcing, Mangrove delivers a modular solution capable of processing a wide range of feedstocks into multiple battery-grade products.

By eliminating the chemical phase separation techniques used by incumbent platforms, the company offers battery manufacturers, lithium producers, and EV supply chains a highly competitive value proposition: waste-free production that requires no large volumes of chemical reagents, significantly driving down both operating costs and emissions.

Securing reliable, sustainably refined lithium is an urgent imperative for the rapid expansion of electric vehicles and grid-scale energy storage. Conventional refining relies on chemical-intensive steps that generate substantial waste. Mangrove directly mitigates these impacts by recycling process streams internally and eliminating process waste requiring disposal. Crucially, life-cycle assessments indicate this technology reduces refining-related greenhouse gas emissions by up to 40% compared to conventional lithium hydroxide production. By enabling localized refining closer to manufacturing hubs, the system further shrinks the environmental footprint associated with transporting intermediate materials across global supply chains.



Mangrove Lithium is reshaping the geography of critical mineral processing by making domestic, low-carbon lithium refining commercially viable. Currently, global refining capacity is highly centralized in a few jurisdictions, creating severe supply vulnerabilities. Mangrove counters this by building regional resilience across North America and other strategic markets. The company's first commercial facility in Delta, British Columbia, will produce 1,000 tonnes of battery-grade lithium hydroxide annually—enough for 25,000 electric vehicles—while supporting highly skilled clean technology jobs. By scaling a versatile and environmentally superior refining platform, Mangrove positions itself and Canada's clean economy as a cornerstone of the secure battery supply chains necessary for the global energy transition.

IMPACT

Environmental & Productivity Potential

UP TO 40%

lower GHG emissions compared with conventional lithium hydroxide production.

25,000

EVs supported annually by the facility's planned production of battery-grade lithium hydroxide.



IMPACT

Environmental & Productivity Potential

OzoneBio's bio-based process reduces lifecycle greenhouse gas emissions by **up to 96%** compared to conventional Nylon 6,6 value chains. By eliminating nitric acid processing, it transforms underutilized forestry waste into **high-performance materials** for plastics and textiles.

*"The technology also **creates value from underutilized biomass streams and supports circular bioeconomy development."***

FOUNDED BY

KHORCHESKA BATYROVA,
ANNA KHUSNUTDINOVA

khorcheska@ozonebiocorp.com

HQ: Calgary, AB

ozonebio.ca

A BIO-BASED ALTERNATIVE

SOLUTION DESCRIPTION

OzoneBio produces bio-based adipic acid from forestry waste, replacing the fossil feedstocks critical to manufacturing Nylon 6,6, engineering plastics, and performance textiles. Conventional adipic acid production relies heavily on a highly polluting nitric acid oxidation process. OzoneBio solves this by upcycling forestry residues into a high-performance, drop-in replacement material.

Having already demonstrated successful bio-based polymer, yarn, and textile samples, the company offers a commercially ready value proposition: a domestic, low-carbon supply that reduces lifecycle emissions by up to 96% without sacrificing the structural performance required by global plastics markets.

Decarbonizing the advanced materials sector is an urgent priority, as traditional adipic acid production generates massive amounts of nitrous oxide—a greenhouse gas far more potent than carbon dioxide. OzoneBio eliminates these emissions by avoiding the nitric acid process entirely. Socially, the company creates high-value manufacturing jobs in Canada while monetizing underutilized biomass, strengthening forestry-dependent communities and reducing reliance on imported petrochemicals.

Operating at the intersection of green chemistry and advanced manufacturing, OzoneBio provides a scalable, premium alternative for a widely used polymer. The company empowers major brands to meet aggressive net-zero targets without retrofitting their existing production lines. Currently scaling toward pilot production, OzoneBio is advancing its bio-based adipic acid toward commercial manufacturing. By transforming forestry waste into a critical green commodity, OzoneBio positions itself—and Canada's cleantech ecosystem—for enduring global leadership in the transition to sustainable, circular industrial manufacturing.

FIXING THE CARBON COMMUTE

IMPACT
Environmental & Productivity Potential

UP TO 50%
lower delivered CO_2 costs for remote customers through localized, on-demand production

1.3 TONNES
of CO_2e reduction in net emissions per tonne of CO_2 delivered compared with incumbent sources

SOLUTION DESCRIPTION

TerraFixing develops cold-climate Direct Air Capture (DAC) technology to produce high-purity carbon dioxide directly from ambient air, resolving severe supply chain vulnerabilities for remote and industrial users.

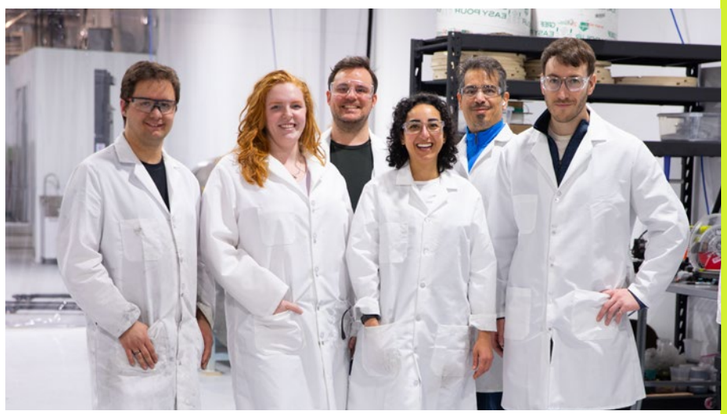
Industrial CO_2 is essential across medical, food and beverage, greenhouse, and manufacturing sectors, yet northern and non-urban communities frequently rely on fossil-derived sources shipped over vast distances. TerraFixing's platform utilizes solid zeolite sorbents to capture CO_2 locally and on demand without requiring hazardous chemicals, process water, or post-capture purification. By replacing long-distance logistics with localized production, TerraFixing delivers a compelling value proposition: providing industrial gas suppliers and remote customers with a controllable, net-negative CO_2 supply at up to 50% lower delivered cost.

> *"A new source of* ***high-purity CO_2****"*

Overcoming traditional supply chain inefficiencies in underserved regions is an urgent priority for both climate action and economic equity. Conventional industrial CO_2 logistics generate heavy emissions, while remote customers often face multi-month delivery delays and pay two to five times major market prices. TerraFixing directly eliminates these disparities, yielding a localized pathway that achieves a net emissions reduction of 1.3 tonnes of CO_2 equivalent per tonne delivered compared to incumbent sources. Socially, the company strengthens regional food security and healthcare continuity by maintaining reliable local access to CO_2 for hospitals and greenhouses. Designed for cold and dry climates, TerraFixing's waterless systems support economic resilience and technical job creation in partnership with remote, northern, and Indigenous communities.

TerraFixing is transforming remote, cold-climate regions from vulnerable supply-chain endpoints into self-sufficient producers of clean-economy infrastructure. The company's near-term commercial strategy targets high-value CO_2 markets across Canada and Alaska, using commercial-grade CO_2 sales as an immediate revenue wedge to fund long-term carbon removal deployment. Currently advancing a 250-tonne-per-year pilot pathway, TerraFixing is establishing the foundation to scale modular systems capable of capturing 10,000 tonnes of CO_2 annually. By pairing commercial viability with net-negative atmospheric capture, TerraFixing positions itself—and Canada's clean economy—for enduring leadership in decentralized direct air capture and sovereign climate infrastructure.





FOUNDED BY

VIDA GABRIEL
SEAN WILSON
vidagabriel@terrafixing.com
HQ: Ottowa, ON
terrafixing.com

BC COMPANY



ROOTS BEYOND REACH

SOLUTION DESCRIPTION

TreeTrack Intelligence Inc. builds autonomous restoration infrastructure to rehabilitate hard-to-access landscapes for forestry companies, mining operators, utilities, governments, and Indigenous communities.

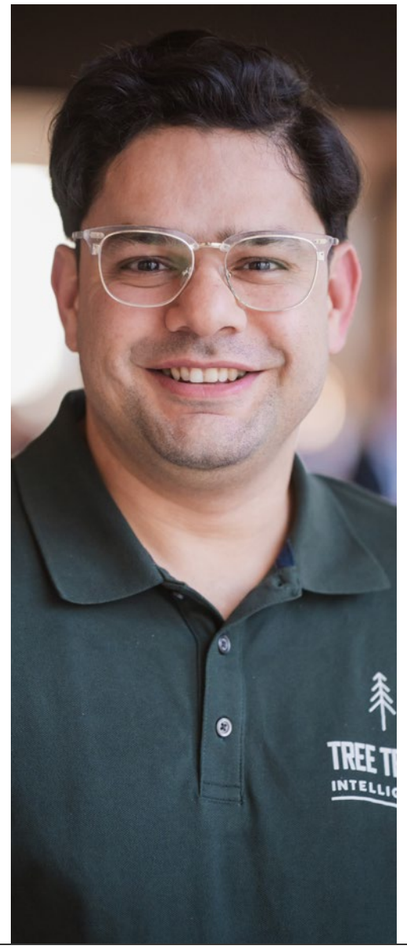
Restoring remote, degraded, or wildfire-affected terrain using conventional manual methods is often hazardous, slow, and expensive. TreeTrack addresses this bottleneck by integrating its proprietary Seedpod technology, biological innovation, and precision deployment systems with an intelligent monitoring platform. This scalable field solution enables obligated industries to fulfill reforestation, mine reclamation, and environmental compliance requirements with verified outcomes. By streamlining field operations, TreeTrack delivers a faster, safer, and measurable restoration alternative at significantly lower operational costs than traditional tree planting.

Accelerating ecosystem recovery is an urgent global priority as extreme weather and industrial activity degrade critical habitats and watersheds. Conventional reforestation relies on manual labor and transport logistics that generate substantial emissions while exposing crews to steep, dangerous terrain. TreeTrack directly mitigates these impacts through a low-carbon, automated deployment platform. Independent third-party analysis indicates that TreeTrack reduces greenhouse gas emissions by 99.7% compared to conventional planting methods—slashing emissions from 2.75 down to 0.009 tonnes of CO_2 equivalent per hectare. Socially, the company enhances worker safety while collaborating with First Nations and rural communities to support local stewardship, climate resilience, and economic opportunity.

TreeTrack makes ecological recovery viable in hard-to-reach areas that were previously uneconomic or unsafe to restore, the company empowers resource industries to meet aggressive environmental standards.

Having already restored more than 300 hectares, TreeTrack is scaling its restoration infrastructure across forestry, mining, and government applications. As regulatory mandates and corporate sustainability commitments intensify, TreeTrack's integrated platform positions the company—and Canada's clean economy—for enduring leadership in automated land stewardship, climate adaptation, and verified ecosystem restoration.

> *"We restore hard-to-access landscapes, delivering **faster, safer, and measurable restoration outcomes.**"*



IMPACT

Environmental & Productivity Potential

99.7%
lower GHG emissions compared with conventional tree planting methods

300+
hectares of land restored using TreeTrack's autonomous restoration approach

FOUNDED BY

AMIR SOLEIMANI
amir@treetrack.ca
HQ: Port Coquitlam, BC
treetrack.ca

BC COMPANY



GROWN TO OUTPERFORM

FOUNDED BY

JAIYA VARSHNEY,
DR. THANOS KRITHARIS,
DR. VIKRAMADITYA YADAV

jaiya@tydralabs.com

HQ: Vancouver, BC

tydralabs.com

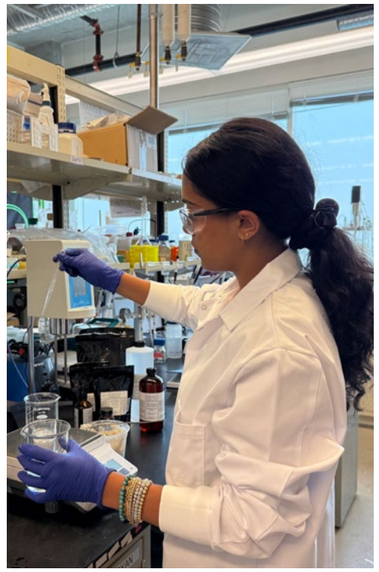
SOLUTION DESCRIPTION

Tydra Labs upcycles food and agricultural waste into fungal fibrillated chitin, providing a vegan, biodegradable biopolymer for the cosmetics, agriculture, and packaging industries. Utilizing a proprietary MechanoBio Extraction process, the company supplies a high-performance, drop-in sustainable ingredient that outperforms both petroleum-based polymers and crustacean-derived alternatives.

Delivering this biopolymer at price parity with conventional chitin, Tydra Labs offers cosmetics formulators and material manufacturers a significantly cleaner, superior-performing solution that requires zero reformulation overhead. As a highly versatile material platform, this ingredient eliminates the steep environmental costs associated with incumbent materials while empowering commercial brands to meet the growing demand for sustainable products.

Transitioning away from petroleum-based plastics and marine-harvested chitin is an urgent global priority, as traditional synthetic polymers carry a heavy carbon footprint of approximately 6 kg CO_2e per kilogram. Tydra Labs mitigates this environmental burden by utilizing a water-based, low-energy bioprocess that diverts fungal biomass from landfills, achieving an estimated 60% to 80% lower carbon footprint than synthetic alternatives. Crucially, the end product is fully biodegradable and leaves behind no persistent microplastics. Socially, this crustacean-free formulation safely opens the clean beauty market to the 2% to 3% of consumers with shellfish allergies who are conventionally excluded from chitin-based products.

> *"We supply cosmetics, agriculture, and packaging companies with a* ***drop-in sustainable ingredient****"*



By lowering the cost and access barriers to sustainable ingredients, Tydra empowers both indie and mid-market brands to transition away from petroleum actives affordably.

Operating at the intersection of green chemistry, advanced materials, and biotech, Tydra Labs is establishing a scalable circular bioeconomy. While the initial commercial focus is cosmetics, its material platform is designed to extend into agriculture, packaging, and biomedical applications, multiplying its impact across multiple global industries. By anchoring a waste-to-value supply chain in British Columbia, the company creates skilled green biotech jobs while demonstrating how agricultural by-products can transform into premium industrial inputs. As global regulatory pressure increasingly targets synthetic additives, Tydra Labs' innovative bioprocessing platform positions the company—and Canada's cleantech ecosystem—for long-term leadership in the sustainable biomaterials transition.

IMPACT

Environmental & Productivity Potential

Tydra Labs' fungal-derived biopolymer achieves an estimated **60–80% lower carbon footprint** than synthetic alternatives, while offering a **fully biodegradable, shellfish-free material that leaves behind no persistent microplastics.**

SUSTAINABLE FIBRE OF THE FUTURE

*"Bringing a **scalable, circular alternative** to synthetic and wood based materials."*



SOLUTION DESCRIPTION

Zylotex Inc. transforms agricultural waste into high-performance, plastic-free fibres, offering a scalable solution for circular advanced materials that supports the bioeconomy.

Zylotex addresses the need for circular materials by upcycling underutilized hemp straw from food and oilseed crops into high-purity cellulose and premium regenerated cellulose fibres for advanced material applications, using processes designed for compatibility with existing manufacturing systems.

Fully biodegradable and plastic-free, Zylotex's regenerated cellulose fibres eliminate plastic microfibre shedding at the source, with projected emissions reductions of up to 13 tonnes of CO_2e per tonne of fibre compared to fossil-derived polyester. A facility producing 5,000 tonnes of fibre annually could avoid over 60,000 tonnes of annual emissions, while using agricultural residues also reduces reliance on wood-derived cellulose.

Operating at the intersection of agtech and advanced materials, Zylotex monetizes agricultural byproducts to create a new, resilient revenue stream for farmers. As operations scale, Zylotex will drive regional economic growth by generating skilled jobs across biomass processing, logistics, and advanced manufacturing in rural and industrial communities—building a traceable North American supply chain that supports the bioeconomy and advances circular, sustainable manufacturing.

IMPACT

Environmental & Productivity Potential

Upcycling Waste
Underused hemp straw is transformed into a high-performance, fully biodegradable fibre.

Reduced Emissions
Reduces GHG emissions by up to 13 tonnes of CO_2e for every tonne of fibre produced.

Plastic-Free Fibres
Prevents the microplastic shedding associated with synthetic textiles.

FOUNDED BY

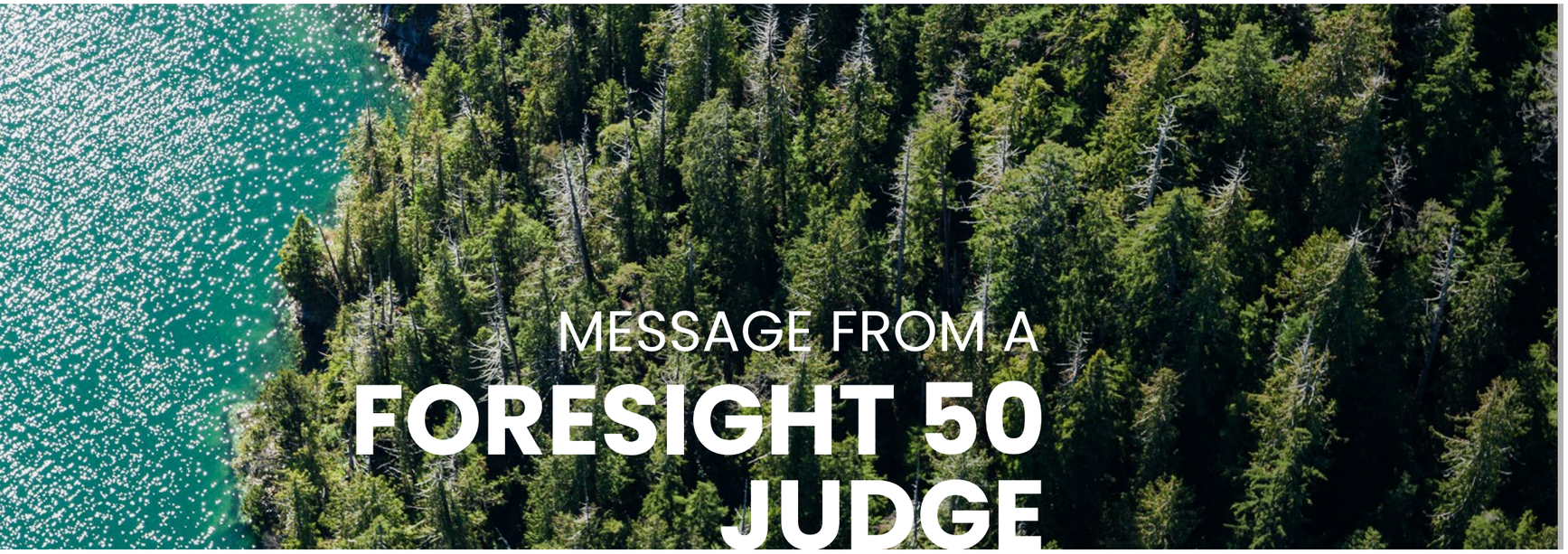
LELIA LAWSON, KEN BARKER, WADE CHUTE
llawson@zylotex.ca
HQ: Edmonton, AB
zylotex.ca

YOU'VE MET THE **HONOUREES...**

NOW IT'S TIME **TO ACT.**

Whether you're an investor, potential partner or adopter, or cleantech champion inspired by these solutions, we encourage you to connect with us directly to take these and previous years' Foresight 50 solutions to the next level.

foresightcac.com/foresight-50 | info@foresightcac.com



MESSAGE FROM A FORESIGHT 50 JUDGE

> *"The most successful environmental startups are not those with the most compelling mission, but those that combine* ***world-class innovation with an exceptional understanding of market needs.*** *The founders recognized by Foresight 50 demonstrate both."*



It is both humbling and inspiring to witness the calibre of entrepreneurs tackling some of the world's most pressing environmental challenges. Through initiatives like Foresight 50, we have the opportunity to identify and celebrate the innovators who are transforming ambitious ideas into scalable businesses capable of delivering meaningful economic and environmental impact. The program shines a spotlight on founders who are not only advancing innovation in Canada but also building companies with the potential to compete and lead on a global stage.

Over the years, I have had the privilege of meeting hundreds of founders across the water and environmental technology sectors, and the companies that stand out share a common characteristic: they are building businesses centred around solutions that address critical problems that industries, municipalities, and communities can no longer afford to ignore.

What impressed me most about this year's cohort is the depth of technical innovation behind their solutions. These entrepreneurs are developing technologies with the potential to fundamentally reshape the way we manage, treat, conserve, and recover our natural resources. They represent meaningful advances capable of disrupting established practices, unlocking new efficiencies, and creating measurable environmental and economic value. However, technology alone is never enough.

The most compelling founders demonstrate an intimate understanding of the challenges they seek to address. Many have spent years working alongside customers, operators, regulators, and industry partners. They understand not only the science and engineering behind their solutions, but also the realities of adoption, procurement, operational constraints, and market demand.

This combination of technical excellence and market insight gives me confidence in their ability to scale and deliver solutions that customers actively want, trust, and are willing to pay for.

Equally inspiring is the purpose that drives them. These founders are motivated by more than commercial success. They share a genuine commitment to addressing some of the world's greatest environmental challenges, driven by an ambition to create lasting impact.

The future of environmental innovation will be built by founders like these, and I am more confident than ever that the sector's next generation of transformative companies is already emerging.

SIMON OLIVIER
Senior Partner
Cycle Capital

JUDGES



AARON STUART
WUTIF Capital

Aaron is COO of WUTIF Capital, an early-stage fund investing in BC tech companies. He also leads VANTEC Angel Network, connecting angel investors and early-stage funds with promising BC-based technology startups.

ALEX NARDI
Emerald

Alex is an Investment Manager at Emerald Technology Ventures, focusing on low-carbon fuels, nuclear, geothermal, and energy. With experience at an electrolyzer startup, he brings both technical and investment expertise.

ANAMIKA MUKHERJEE
BDC Capital

Anamika is a Partner at BDC Capital's Sustainability & Climate Venture Funds, investing in energy and sustainability technologies. Previously, she led innovation at Cenovus Energy, one of Canada's largest energy companies.



CHRIS EDWARDS
Tall Grass Ventures

Chris specializes in fund operations and portfolio management. With 20 years of experience, he works closely with founders and has a passion for agri-food innovation.

DANIA MOAZZAM
RBC

Dania is a strategic advisor in Calgary's tech community. Holding a CFA charter, she mentors entrepreneurs and is deeply involved in Alberta's innovation ecosystem.

DANIEL KRIOZERE
Anthropocene Ventures

Daniel splits his time between early-stage equity at Anthropocene Ventures and growth credit at IFM Investors, remaining active across multiple asset classes in climate finance.



ANDREW WONG
TRIREC

Andrew is a director at TRIREC with over a decade of finance experience. He leads strategic deals in energy, mobility, and agriculture, and founded the Little Environment Club to support Asia's climate tech community.

BEN GIBBONS
Waterpoint Lane

Serving as Co-Managing Partner and CIO, Ben shapes Waterpoint Lane's overall strategic direction. With 20+ years in finance, he has led over $2 billion in transactions and serves on two portfolio company boards.

BLAKE BUNTING
Goparity Canada

As Co-founder of Goparity Canada, Blake has secured over $1 million in funding and facilitated nearly $1 million in loans. He has been recognized as one of Canada's Top 25 Environmentalists Under 25.



DAVID WEEKES
Pangaea Ventures

Prior to his role as an associate at Pangaea Ventures, David developed research and tech initiatives at UBC. He is an active mentor within the BC startup community and holds a PhD in Chemistry.

DOUG LUI
Vine / Misfit Ventures

Doug has over 25 years of experience in corporate finance and is the founder of Misfit Ventures, an LGBTQ+ venture capital fund. He also serves as a venture partner at Vine Ventures, focusing on ESG projects.

EMILY PORTA
Maple Leaf Angels

Emily is the Executive Director of Maple Leaf Angels, Toronto's largest angel investor network, where she leads deal flow, investor programs, and strategic partnerships within Canada's startup and early-stage investment ecosystem.



ERIC YAO
Azolla Ventures

As an investment analyst, Eric sources and manages strategic investment opportunities. A Rutgers University graduate, he previously advised Fortune 500 companies on sustainability and branding.



GRANT LAWRENCE
Valhalla Private Capital

Grant is an active angel investor, managing Valhalla Angels' BC chapters. With over 20 years of B2B experience, he helps founders with sales, business development, and capital raises.



GUIRONG YANG
Xavaav Capital

A seasoned executive and investor with 30 years' experience, Guirong has a strong track record in the renewable energy sector. He is a founding partner of Pacific Hi-Tech Investment, focusing on cleantech.



JENNIFER FUCCILLO
Invest Nova Scotia

An Investment Director at Invest Nova Scotia, Jen specializes in funding and scaling early-stage cleantech startups. With 10+ years of entrepreneurial experience, she brings both founder and investor perspectives to mentoring ventures.



JESSICA LAJOIE
Alberta Ecotrust

Jessica is an environmental engineer who leads impact assessments for the Climate Innovation Fund (hosted by the Alberta Ecotrust Foundation). She is dedicated to advancing AB environmental projects.



JINNA LEE
Endgame Capital

A founding partner of climate tech VC fund Endgame Capital, Jinna is a two-time founder with exits in hospitality and sustainable packaging. She brings an operator's perspective to early-stage investing.



HENRY HEITZER
Earth Foundry

As Director at Earth Foundry, Henry identifies emerging innovation trends and leads investment decisions. He previously served as a BCG strategy consultant and holds a PhD in Chemistry.



HENRY KUTARNA
Kutarna Capital Corporation

Henry is an angel investor, executive advisor, and leadership coach with 15+ years evaluating early-stage tech companies. He has also held senior public sector roles, including Deputy Minister of Economic Development.



JENNIE GRAHAM
Burnt Island Ventures

After supporting founders in Afghanistan and the Middle East, Jennie transitioned into venture capital, specializing in water, food, and waste investments. She holds an MBA from Duke University.



JONATHAN GRAHAM
Investor

Specializing in mining, manufacturing, and cleantech, Jonathan serves on the board of a global industrial minerals company and has held strategy roles at Siemens UK.



KATIE KLOSKA
Toyota Ventures

Katie is a senior analyst at Toyota Ventures, where she sources and evaluates climate tech startups. She holds a PhD in Chemistry and previously evaluated climate and biotech startups at Helikon Consulting.



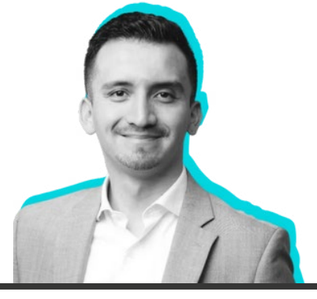
KYLE WILSON
Metis Settlements Development Corporation

As Interim Chief Executive Officer and Chief Investment Officer at Metis Settlements Development Corporation, Kyle drives investment strategy and execution to advance Indigenous economic prosperity.



LUDOVIC COPERE
Sony Innovation Fund

Ludovic brings 17 years of venture capital experience at Sony, driving scouting and due diligence for the Sony Innovation Fund. He focuses on fintech, mobility, and agtech.



MANUEL GARCIA
UCeed

As an Associate at the UCeed Energy Fund, Manuel invests in deep tech and energy. He works with founders to advance science-based solutions toward commercialization.



MEHRAN SALIMIAN
RBCx

As VP, Banking at RBCx, Mehran works with Canadian climate tech and sustainability founders, drawing on 20+ years of experience to support commercialization, capital strategies, partnerships, and scalable growth.



MOIEN GIASHI
GreenSky Ventures

A polymer engineer turned venture capital investor, Moien serves as Principal at GreenSky Ventures and sits on multiple startup boards, including eight GreenSky portfolio companies.



NICOLAS BRUNET
Idealist Capital

Nicolas brings 20+ years of corporate finance leadership, including 15 years at BMO Capital Markets and C-suite roles as CFO and President of Lion Electric. He specializes in capital raising, M&A, technology, and renewable energy.



NIKHIL NAYAR
Rogue Insight Capital Ltd.

Nikhil leads investments at Rogue, a single-family office, focusing on sourcing, due diligence, and portfolio strategy. He has a track record of backing high-growth ventures.



OLIVIA HORNBY
Spring Capital

As a founding partner at Spring Impact Capital, Olivia invests in pre-seed climate and health companies. She has over 15 years of finance experience, including a previous role as a VP at Goldman Sachs.



SCOTT GINGRICH
Evok Innovations

Scott supports thesis development, deal flow, and due diligence. He has worked with startup accelerators and co-founded a software company. He holds degrees in commerce and sustainability.



SIMON OLIVIER
Cycle Capital

A global executive with a background in innovation and finance, Simon led GE's entry into renewables and oversaw M&A for GE Ventures. He empowers organizations to scale transformative solutions.



STEVEN XU
INP Capital

Steven has over 20 years of proven financial experience and is a co-founder, CEO, and managing partner. He focuses on high-tech, agriculture, and healthcare strategic investments, and has successfully nurtured three unicorn companies.



TOM BODDEZ
Active Impact Investments

As General Partner at Active Impact Investments, Tom leads deal flow, capital formation, and portfolio impact. Previously, he spent 27 years practising tax law at Thorsteinssons LLP, including serving as Managing Partner.



TOM URBAN
Agribusiness Advisors

With a career spanning Goldman Sachs, Pioneer, and DuPont, Tom is a seasoned expert in agriculture and finance. He served as CEO of CellFor until its acquisition, and founded Agribusiness Advisors in 2013.



TOMICA DIVIC
Innovate BC

As VP, Strategic Partnerships and Ecosystem Development at Innovate BC, Tomica leads partnerships that strengthen BC's innovation ecosystem. Her international experience spans business, commercial law, public relations, and innovation.



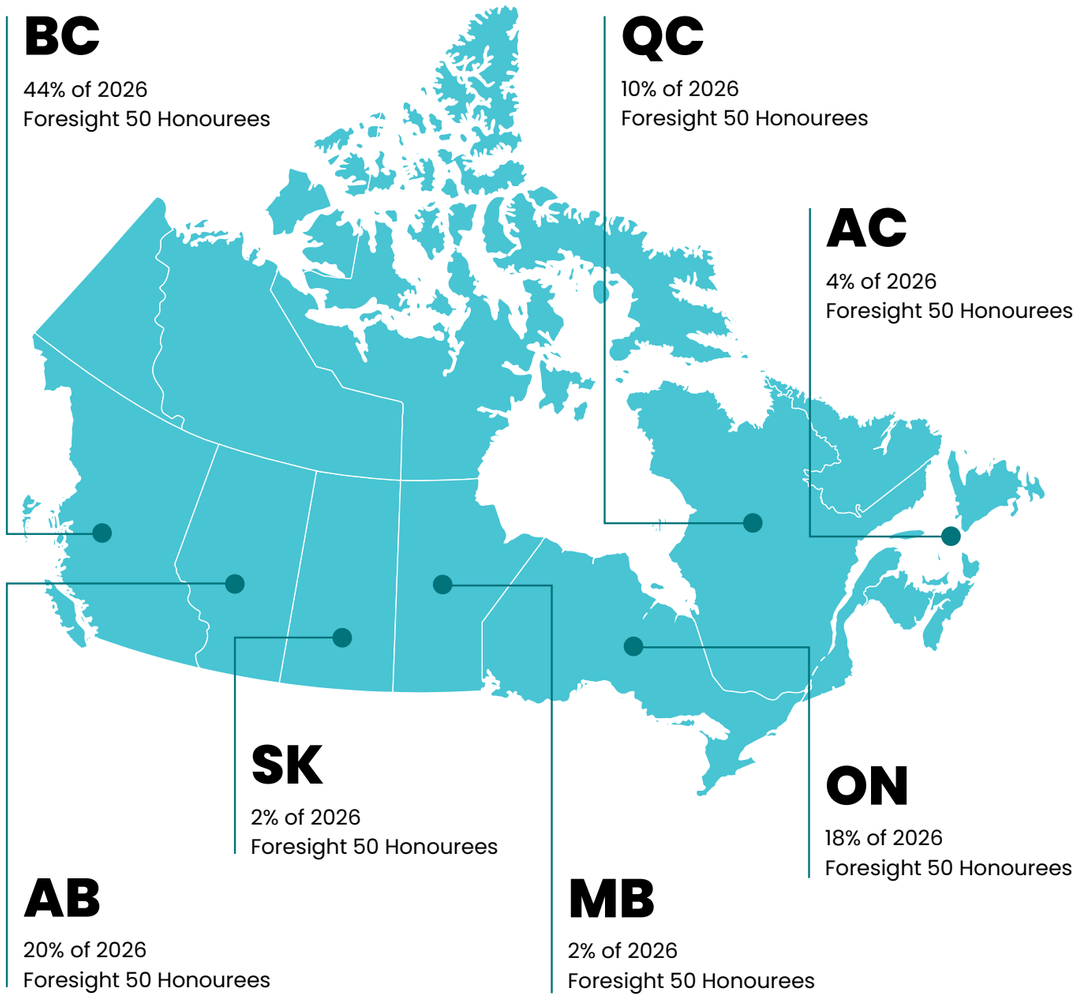
UZOMA ERONDU
The Atmospheric Fund

Uzoma oversees market research and due diligence for low-carbon investments. He is a Chartered Accountant and CFA Charterholder, with experience at SVX and KPMG.

BE PART OF **THE NEXT 50.**

Looking ahead to 2027? **Register your interest** to explore opportunities for involvement and help shape the next annual Foresight 50.





BC
44% of 2026
Foresight 50 Honourees

QC
10% of 2026
Foresight 50 Honourees

AC
4% of 2026
Foresight 50 Honourees

SK
2% of 2026
Foresight 50 Honourees

ON
18% of 2026
Foresight 50 Honourees

AB
20% of 2026
Foresight 50 Honourees

MB
2% of 2026
Foresight 50 Honourees

38
of 2026 Foresight 50 Ventures have Women-Identifying C-Suite Leaders

5
of 2026 Foresight 50 Ventures have Indigenous-Identifying C-Suite Leaders

23
of 2026 Foresight 50 Ventures have BIPOC-Identifying C-Suite Leaders

ACKNOWLEDGEMENTS

This pitchbook content was written and designed by Faye Boxall and Heather Kingdon, with support from Alyssa Kelly, Astrid Nuñez, Deepthi Sendilkumar, Jessie Alexander, and Michelle Pavlik.

ABOUT FORESIGHT

Foresight Canada helps the world do more with less, sustainably. As Canada's largest cleantech innovation and adoption accelerator, we de-risk and simplify public and private sector adoption of the world's best clean technologies to improve productivity, profitability, and economic competitiveness, all while addressing urgent climate challenges.

DISCLAIMER

Information in this pitchbook was collected between August and September, 2026, and therefore some information may have been updated since then. For the most up-to-date venture investment information, please contact the ventures directly.While each Foresight 50 honouree's application went through a rigorous evaluation process by our external panel of judges, many of the projected environmental and economic impact metrics were self-reported by the ventures. Please connect with the ventures directly to explore how they calculated this projected impact.

NO INVESTMENT ADVICE: The content provided is for informational purposes only; you should not construe any such information or other material as legal, tax, investment, financial, or other advice. Nothing contained herein constitutes a solicitation, recommendation, endorsement, or offer by Foresight or any third-party service provider to buy or sell any securities or other financial instruments in this or in any other jurisdiction in which such solicitation or offer would be unlawful under the securities laws of such jurisdiction. All content is information of a general nature and does not address the circumstances of any particular individual or entity. You alone assume the sole responsibility of evaluating the merits and risks associated with the use of any information or other content provided herein before making any decisions based on such information or other content.

IMAGE ATTRIBUTIONS

Product and venture photography featured in this pitchbook are provided directly by and credited to the respective participating companies.