



Converging community, scaling impact

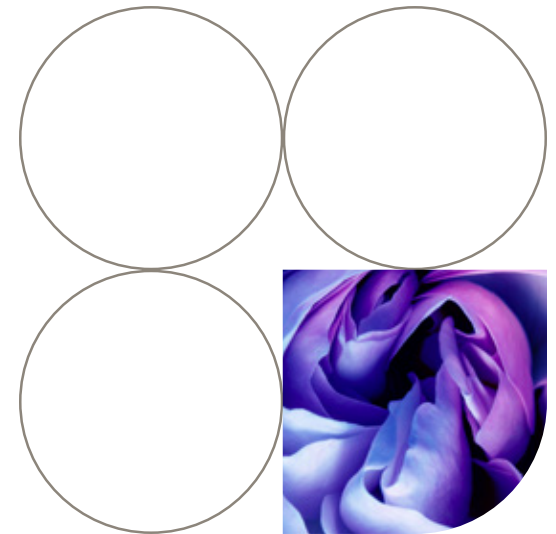
2023-24 Annual Report

APRIL 1, 2023 – MARCH 31, 2024

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Converging community, scaling impact

The B.C. Centre for Innovation and Clean Energy (CICE) aims to fast-track the commercialization and adoption of clean energy and climate solutions, positioning Canada as a leader in the emerging net-zero global economy. By validating actionable decarbonization pathways and investing in breakthrough solutions, CICE unlocks B.C.'s climate impact potential. We are proud to share the 2023-24 achievements of our team and the innovators we support.



33 TOTAL
5 COMPLETED



BC-BASED PROJECTS
SUCCESSFULLY SUPPORTED

\$22.4M

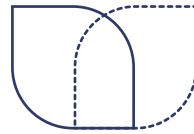
COMMITTED NON-DILUTIVE
INVESTMENT BY CICE

>> \$139M

TOTAL PROJECT VALUE

1.02 MILLION TONNES/YR POTENTIAL GHG ABATEMENT

\$46M 18%



CATALYZED INVESTMENT INDIGENOUS PARTICIPATION
IN FUNDED PROJECTS

513

GREEN
JOBS
CREATED



B.C. impact
to date



\$7.01:\$1.00

> \$111 M REVENUE PROJECTED TO THE BC ECONOMY
(AS A RESULT OF PROJECT FUNDING)

LEVERAGED FUNDING WITHIN 6
MONTHS OF PROJECT START
(PUBLIC & PRIVATE TO CICE)

68% MANGEMENT TEAMS INCLUDE
UNDERREPRESENTED GROUPS



21 IP PATENTS GRANTED



61%
PROJECTS LED BY
BC-BASED STARTUPS

\$680K AVERAGE CICE FUNDING PER PROJECT

*Cumulative to March 31, 2024

Message from our board chair

With 13 companies featured on the 2024 Global Cleantech 100 list, Canada stands out, ranking second only to the U.S. on the 2024 Global Cleantech Innovation Index. Notably, seven of these 13 companies are based in British Columbia, cementing our province as a top 10 global clean technology hub.



DAN WOYNILLOWICZ
BOARD CHAIR & PRINCIPLE OF
POLARIS STRATEGY + INSIGHT

With leading climate action policies, a skilled workforce, a culture of innovation, abundant natural resources, and access to affordable, reliable clean power, B.C. is well-positioned to lead the global energy transition.

Since its inception in October 2021, the B.C. Centre for Innovation and Clean Energy (CICE) has been building on these strengths, fostering collaboration between public and private sectors, and supporting innovation and entrepreneurship. CICE provides non-dilutive investment to B.C.-based companies, as well as the industry connections they need to scale into global leaders in climate action.

This past year was nothing short of transformative for CICE. At our inaugural CICE Converge conference last November, we united and strengthened a community of innovators with incredible ideas, ready to scale technologies to combat the challenges presented by

climate change, and seize the opportunities of the energy transition. In January 2024, our open call for innovation sparked remarkable interest across the province, resulting in over 190 applications focused on critical areas, from forest residue management to innovation in vehicle-to-grid energy storage.

We also successfully proved our ability to crowd in additional capital, helping to mobilize \$139 million in project funding and catalyze \$46 million in additional investment. We are now B.C.'s largest early-stage climate investor and have grown our non-dilutive investment portfolio by \$19.1 million to over \$22.4 million, advancing 33 promising solutions towards scale-up from Canada to the world.

The solid foundation and momentum developed over the past year has positioned CICE to make an even greater impact in the years ahead. March 2024 marked

the arrival of Sarah Goodman as our new President and CEO. With her extensive experience in both the public and private sectors, Sarah is poised to lead CICE into its next phase, driving strategic investments, supporting B.C.'s best entrepreneurs, and steadfastly supporting Canada's decarbonization efforts.

None of this would be possible without the unwavering support of our advisors, founding members—the Government of British Columbia, Shell Canada, and Natural Resources Canada—and my fellow board members. Together, we've set ambitious goals to accelerate breakthrough innovation and position B.C. at the forefront of the global clean energy transition. Today, we are not just setting goals; we are achieving them.

Thank you for your continued belief in the transformative power of innovation and clean energy.

Message from our chief executive officer

Climate technology isn't just about combatting climate change. It's about outpacing global competition, boosting productivity, and ensuring energy security, all while delivering affordable energy. That's why supporting climate technology innovators is not just important, it's imperative.



SARAH GOODMAN
PRESIDENT AND CHIEF EXECUTIVE OFFICER

Technologies like renewable energy and electric vehicles, which are or will soon be cost-competitive at scale, can get us halfway to net-zero emissions. To address the remaining challenges, we must advance the next wave of climate technology, including batteries and energy storage, low carbon fuels, carbon management, and low-carbon hydrogen.

In British Columbia, the B.C. Centre for Innovation and Clean Energy (CICE) is at the forefront of this push for innovation. We validate actionable decarbonization pathways and provide early-stage capital to accelerate the development, commercialization, and adoption of climate and clean energy technologies.

Leading an organization that prioritizes action and impact is an honour I was proud to step into when I joined as President and CEO of CICE in March 2024. Supporting climate innovators is essential for cultivating a prosperous, clean economy that attracts investment, promotes diversity, retains intellectual property in B.C., and creates high-paying jobs.

CICE's important role as B.C.'s largest early-stage climate technology investor was underscored when it was recognized as "Funder of the Year" at Foresight's 2024 B.C. Cleantech Awards. As of March 2024, CICE has invested \$22.4 million into climate solutions. These investments empower companies like Moment Energy, recognized on the 'Global Cleantech 100' list, UBC spin-out Arca, and Indigenous-owned Innovatree Carbon Group, to drive groundbreaking climate solutions.

Looking ahead, CICE is poised to scale its portfolio and enhance its climate and economic impact. Over the next year, we anticipate doubling the amount of capital invested to-date. This will be done through broad innovation calls and targeted initiatives to attract solutions in spaces like wildfire technology.

I extend my heartfelt gratitude to the entire CICE team, our dedicated board members and advisors, and our founding members — the Government of British Columbia, Shell Canada, and Natural Resources Canada. Most importantly, I thank all the climate technology innovators who are building the solutions the world needs. We're honoured to be part of your journey.

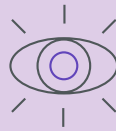
Who we are

The B.C. Centre for Innovation and Clean Energy (CICE) is British Columbia's largest early-stage climate investor. We are an independent, not-for-profit corporation that provides B.C. innovators faster, easier access to the early-stage non-dilutive investment and collaborative partnerships they need to become global leaders in climate action. Together with our climate-first community, we advance the world toward a net-zero future, scaling B.C.'s most impactful clean energy and climate solutions – from Canada to the world.



MISSION

Pioneer and fast-track the commercialization of B.C. clean energy and climate solutions to prosper in a net-zero global economy






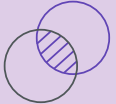




VISION

Leverage B.C.'s clean energy breakthroughs to attract investment, create good jobs, and build sustainable economic prosperity



CORE VALUES

- | | | | |
|---|---|---|--|
| 
CLIMATE OBSESSED | 
PEOPLE MATTER | 
SPEED AND SIMPLICITY | 
RESULTS ORIENTED |
| 
OPEN COLLABORATION | 
RADICAL TRANSPARENCY | 
FAILURE IS AN OPTION | 
THINK BIG |

A photograph of a beach with driftwood and ice chunks. The background shows a sandy beach with several large, rectangular blocks of white foam or ice scattered across it. In the foreground, a large, weathered piece of driftwood lies horizontally across the frame. A dark, semi-transparent text box is overlaid on the right side of the image, containing a quote and the name of the speaker. The text box has a white border and a white quote icon.

“

Safely and effectively developing an industrial hard-tech from the shop, to a pilot, to commercial demo is very capital intense. The flexible and non-dilutive funding from CICE is an essential growth enabler in our path to commercialization. We can maintain a core focus on de-risking the commercial techno-economics and strengthen our academic partnership, without compromising our Indigenous partner values or precious resources.”

OWEN MILLER, PRESIDENT OF DEADWOOD INNOVATIONS

Our members

CICE's members are at the forefront of pioneering solutions that drive Canada towards a net-zero future. Established in October 2021 by the Government of British Columbia, Shell Canada Ltd., and Natural Resources Canada, CICE brings public and private sectors together to collectively tackle industry decarbonization challenges through collaborative partnerships, shared investment, agile cleantech development and early adoption.

To date, \$105M has been raised through member-based partnerships. CICE operates independent from government and private entities. We are a non-profit corporation run by its own staff and governed by an independent Board of Directors that are elected by its voting members. We currently have two voting members, the Government of British Columbia and Shell Canada Ltd.



BRITISH
COLUMBIA



Canada 

Shell has long recognized that innovation and collaboration go hand in hand. Working in partnership with other companies, both big and small, as well as with communities, governments, and customers will help drive the new technologies that are needed to navigate the energy transition. Shell is proud to be a member of the B.C. Centre for Innovation and Clean Energy and we look forward to continue working with this group of innovators."

SUSANNAH PIERCE, PRESIDENT AND COUNTRY CHAIR, SHELL CANADA LTD.

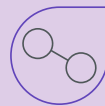
Who we fund

CICE's focus is on commercializing and scaling the next wave of technologies that address hard to decarbonize challenges in high-emitting industries such as:

- » Mining
- » Forestry
- » Agriculture
- » Marine
- » Oil and gas
- » Aviation
- » Transportation
- » Industrial manufacturing
- » Technology

This includes hard tech, soft tech, emissions measurement, and business model innovation across our focus areas.

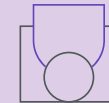
CICE investment focus areas



LOW CARBON
HYDROGEN



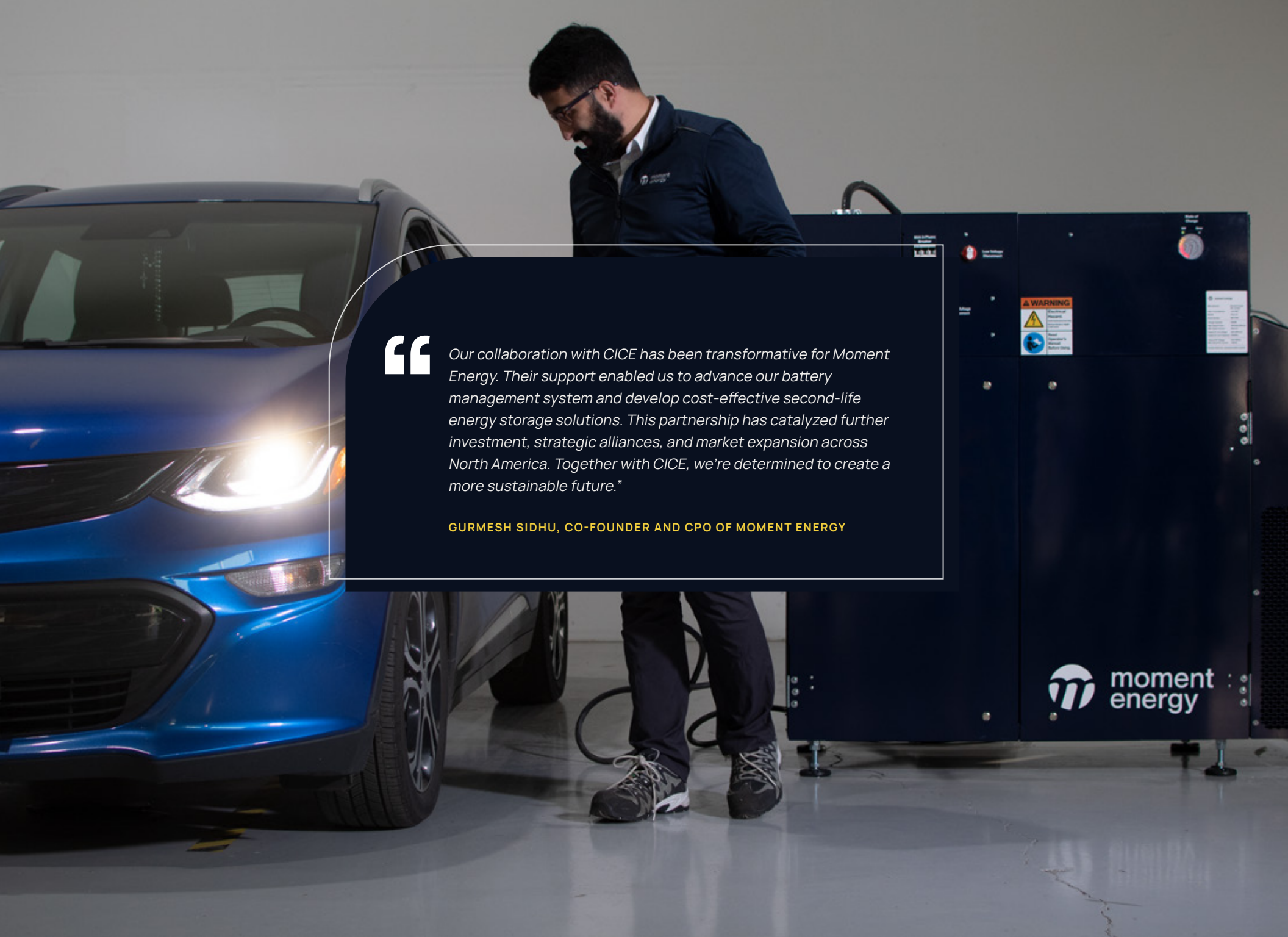
BATTERY
TECHNOLOGY +
ENERGY STORAGE



CARBON
MANAGEMENT




LOW CARBON BIO +
SYNTHETIC FUELS



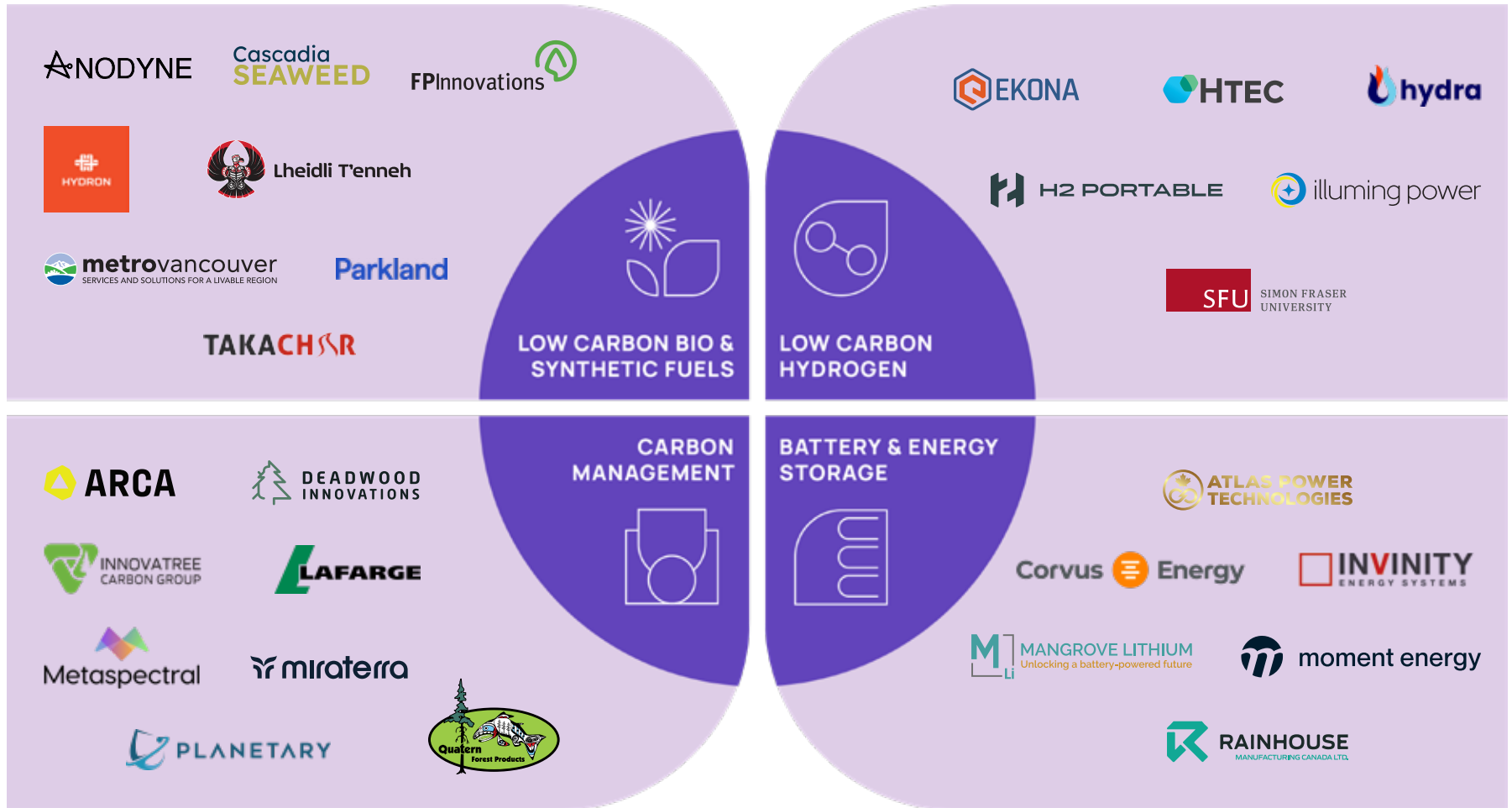
“

Our collaboration with CICE has been transformative for Moment Energy. Their support enabled us to advance our battery management system and develop cost-effective second-life energy storage solutions. This partnership has catalyzed further investment, strategic alliances, and market expansion across North America. Together with CICE, we're determined to create a more sustainable future.”

GURMESH SIDHU, CO-FOUNDER AND CPO OF MOMENT ENERGY

 **moment
energy**

Our changemakers



*Funded companies as of March 31, 2024



“

As Metaspectral is committed to harnessing the power of hyperspectral imagery for the betterment of our environment, the project funding from CICE allows us to directly contribute to the global effort of carbon management, a critical step in combating climate change. The funding we have received is not just a financial boost, but an endorsement of our vision and the potential impact that our project will have.”

LEIGH MARTIN-BOYD, DIRECTOR, GOVERNMENT BUSINESS DEVELOPMENT AND PROGRAMS AT METASPECTRAL

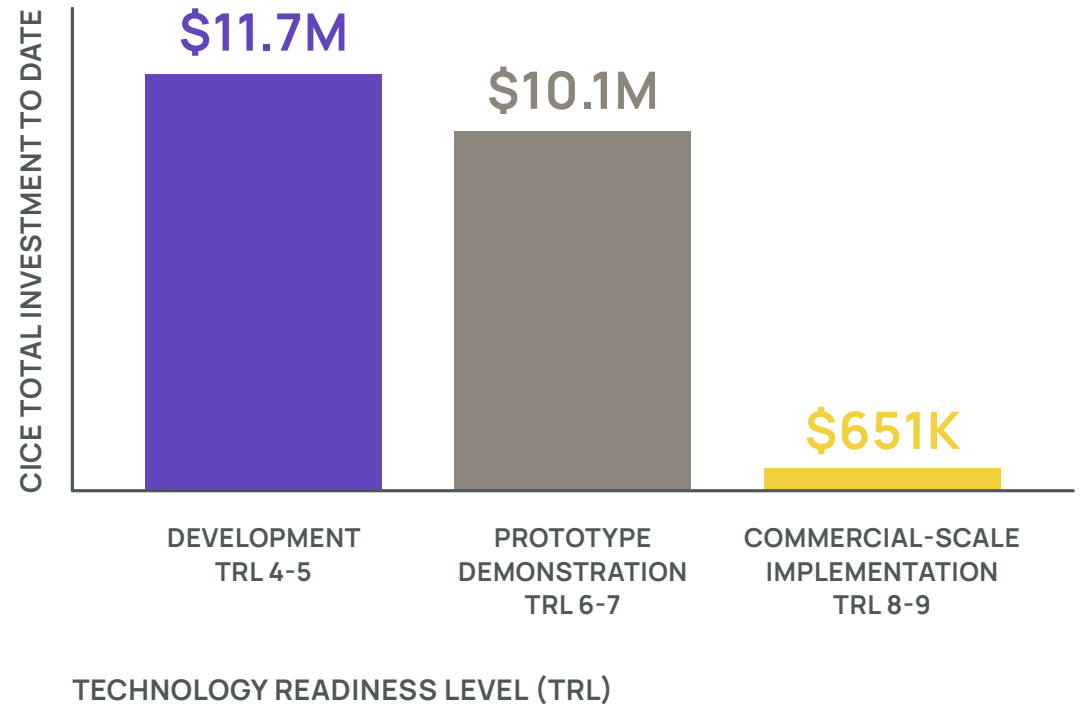
Our intelligent risk-taking investment framework

CICE leads catalytic investment into innovation at its earliest stages – where lack of validation and conventional revenue metrics are often a barrier to funding.

We connect clean energy and climate solutions providers with industry partners to drive market development, accelerate adoption, and enable a world class cleantech sector to lead the global energy transition.

Utilizing our unique intelligent risk-taking investment framework, CICE maximizes investment outcomes and advances credible, world-class solutions across the Technology Readiness Level (TRL) 4-9 range.

Cumulative investment outcomes by innovation stage

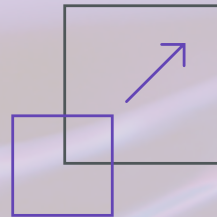


3 pillars of CICE's intelligent risk-taking investment framework



INTELLIGENCE-DRIVEN CLIMATE ACTION

Identify + validate future pathways to net-zero – underpins CICE calls for innovation



EFFICIENT + EFFECTIVE SCALING

Mobilize community partnerships for faster market adoption – supports good jobs, global investment + a clean economy



CATALYTIC DE-RISKED INVESTMENT

Lead public-private co-investment into disruptive innovation – unlocks capital critical to advancing big climate wins



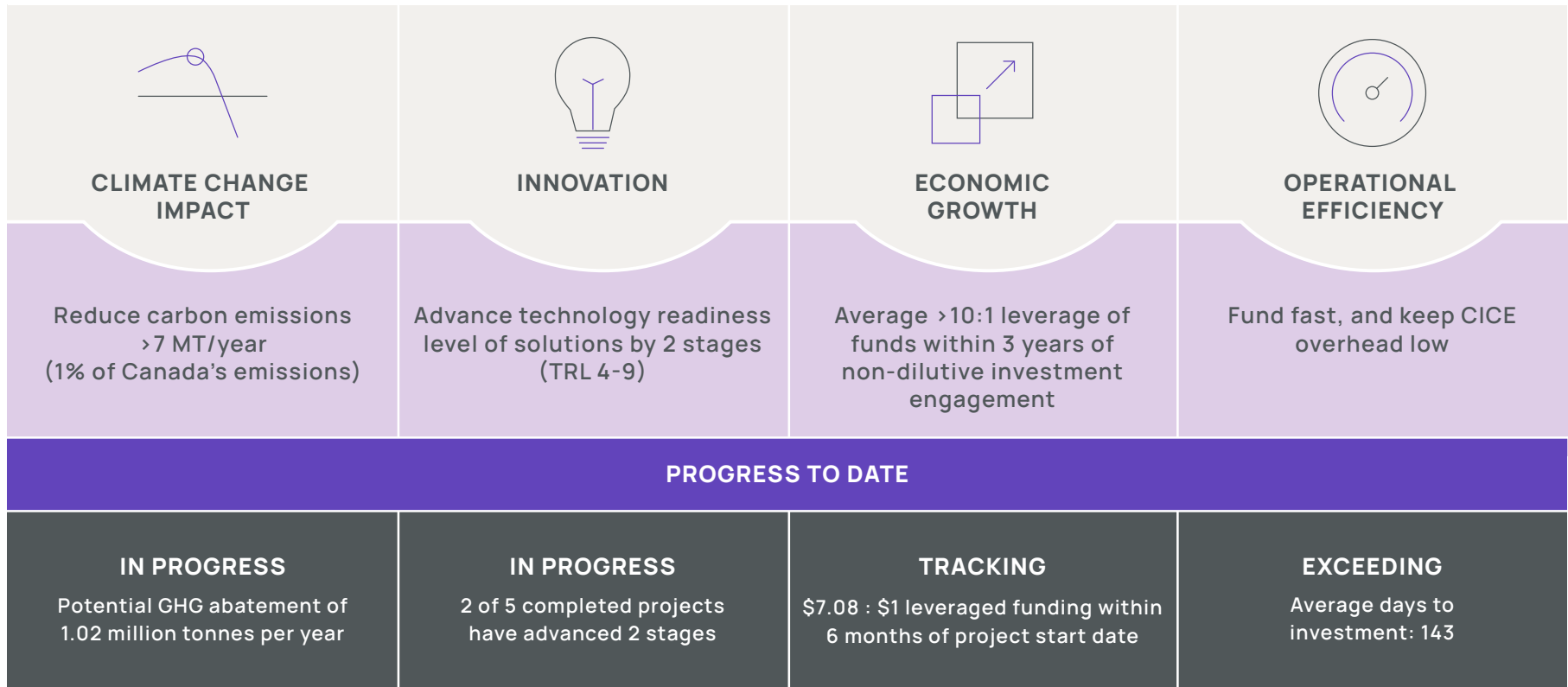
“

This first-of-a-kind project will be closely watched by the mining industry and by the emerging carbon dioxide removal industry. The CICE partnership has been fundamentally important, enabling Arca to establish and operate the demonstration project over the first year. This has de-risked the project for our mining partner and will enable us to deliver the highest-quality carbon dioxide removals to our purchase partners on schedule. Based on these results, mining companies in Canada and around the world will know how to partner with Arca to use their tailings in the fight against climate change. We expect Arca's pathway to scaling this CDR technology to be well-established, thanks to CICE.”

GREG DIPPLE, HEAD OF SCIENCE AND CO-FOUNDER OF ARCA

Our strategic priorities

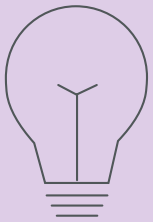
In 2023-24, the following long-term strategic priorities framed CICE's activities:



*To date, as of March 31, 2024

Our 2024–25 goals

In 2024-25, CICE will continue to advance these strategic priorities by focusing on the following goals:



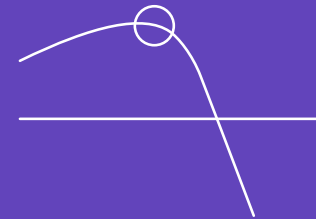
INNOVATION

Lead intelligence – driven “big impact” innovation



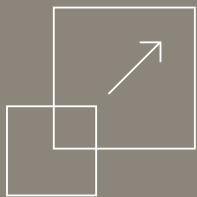
INVESTMENT

Catalyze investment and overcome barriers to funding early-stage innovation



DECARBONIZATION

Enable a dynamic community dedicated to decarbonization



LOCAL GROWTH

Scale B.C. companies through global connectedness



MEMBER ATTRACTION

Attract CICE members with a compelling value proposition



“

CICE has been critical for H2Portable to bridge to commercial readiness. End-user customers have requirements that can't be solved solely by technology, customers need commercial solutions that can scale. CICE is a dedicated partner that shares that vision and is helping H2Portable through the design, build, and deploy phases needed to prove a viable solution is ready for adoption.”

DAG HINRICHS, PRESIDENT OF H2 PORTABLE POWER CORP

24 NEW PROJECTS SUPPORTED



SARAH GOODMAN

NEW CICE PRESIDENT & CEO ANNOUNCED



4 CALLS FOR INNOVATION WITH 190+ APPLICANTS

- OPEN INTAKE
 - MEASURING, MONITORING AND VERIFICATION OF CARBON MANAGEMENT
 - FOREST RESIDUE MANAGEMENT
 - UNIVERSITY VENTURE PROGRAMS
- 

2 **\$115.5M** ADDED PROJECT VALUE

COMPREHENSIVE INTELLIGENCE REPORTS RELEASED

B.C. Hydrogen Regulatory Mapping Study
Catalyzing Carbon Dioxide Removal at Scale Report

\$19.1M

ADDED CICE NON-DILUTIVE INVESTMENT

AVERAGE CICE FUNDING PER PROJECT

\$763K



2024 FUNDER OF THE YEAR

– FORESIGHT BC CLEANTECH AWARDS

143

AVERAGE DAYS TO INVESTMENT




4500+ SOCIAL MEDIA FOLLOWERS

2023-24 accomplishments

28,000+ STAKEHOLDER REACH VIA

WEBINARS, EVENTS SUCH AS CICE CONVERGE, NATURAL RESOURCES FORUM, GLOBE FORUM, MMV-CARBON COUNT, COAST, CARBON REMOVAL CANADA, CANADIAN HYDROGEN CONFERENCE, BC TECH AWARDS, AND OTHER COMMUNITY ENGAGEMENTS





Reports + financials

[Financial Statements 2023-24 \(PDF\)](#)

[CICE Supported Projects 2023-24 \(PDF\)](#)

2023-24

CICE investment portfolio at a glance

\$19.1M

COMMITTED

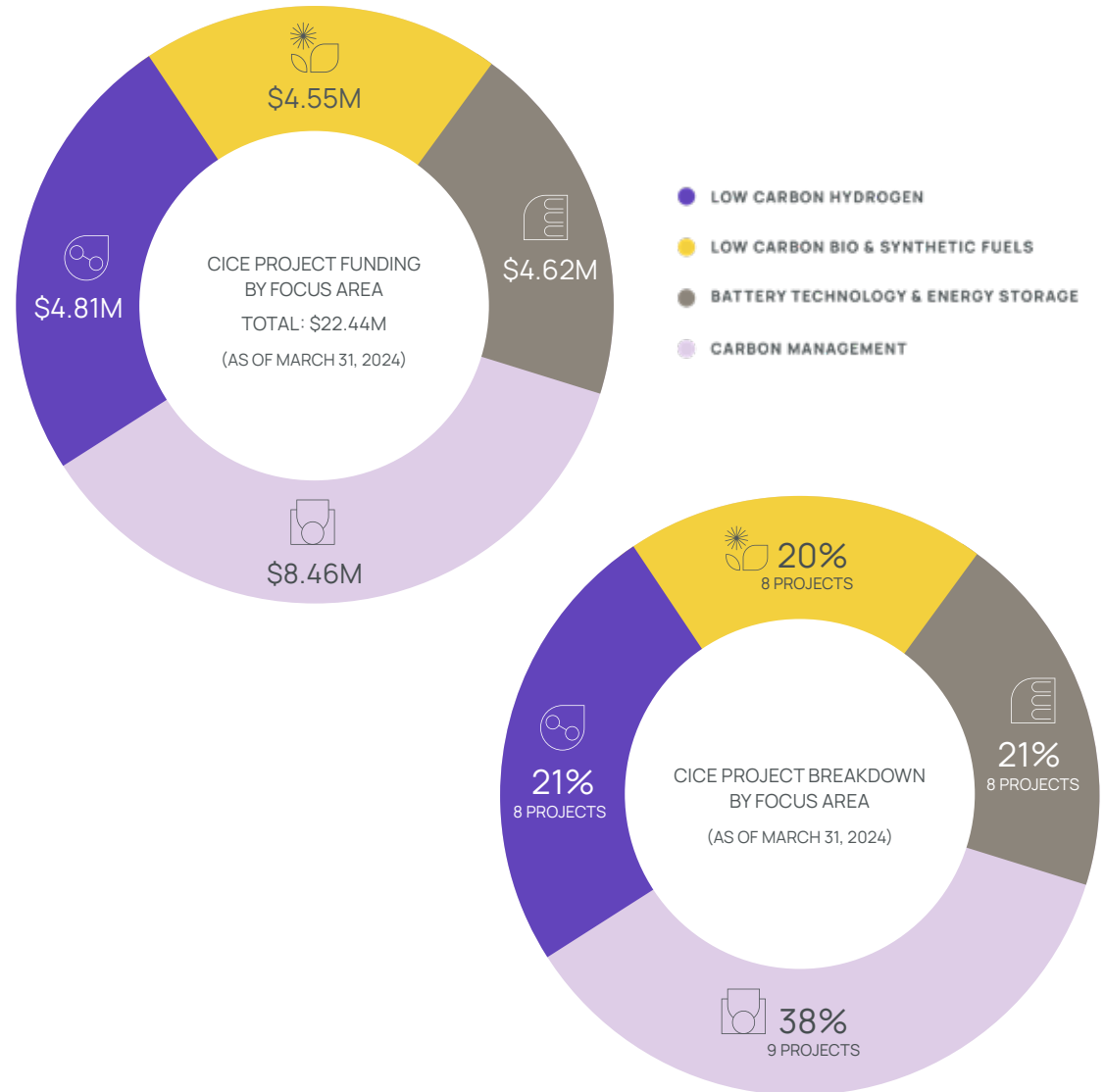
\$763K

AVERAGE FUNDING PER PROJECT

143

AVERAGE NUMBER OF DAYS TO FUND

COMMITTED TO DATE – \$22.4M
PER PROJECT TO DATE – \$680K
AVERAGE # OF DAYS TO FUND – 155



An aerial photograph of a forest, where the tree canopy is overlaid with a vibrant, multi-colored pattern of red, purple, yellow, and white, creating a textured, abstract effect. The pattern appears to be a digital overlay or a specific type of forest management visualization.

“

This project is critical as it will allow us to quantify the rate that forests are sequestering carbon with and without fertilization, under different fertilization treatments, across different stand types, and for different tree species. This will enable us to better deploy fertilization treatments to ensure that the forests we manage are most actively fighting climate change.”

JONATHAN LOK, GENERAL MANAGER OF QUATERN LIMITED PARTNERSHIP

Converging on intelligence

CICE uniquely identifies and validates pathways to net zero – pinpointing B.C.'s critical decarbonization needs and opportunities. Intelligence is gathered through a combination of community engagement, deep-dive reports, and consultation with world-class subject matter experts, informing CICE's funding thesis for innovation, de-risking investment, and evaluating breakthrough solutions with a lens of real-world market readiness.

B.C. HYDROGEN REGULATORY MAPPING STUDY (JUNE 2023)

Examining how hydrogen production projects are currently regulated and permitted in B.C. and detailing all requirements in one document. CICE released this report in partnership with Stantec and the Province of British Columbia.



CATALYZING CARBON DIOXIDE REMOVAL AT SCALE (FEBRUARY 2024)

Analyzing the requirements, challenges, and innovation opportunities for removing carbon dioxide from our atmosphere at a multi-gigatonne scale. CICE released this report in collaboration with Innovative Breakthrough Energy Technologies (IBET).



Intelligence plans for 2024-25

The main objective of CICE's intelligence reports is to guide and de-risk non-dilutive investment priorities and future calls for innovation. We release intelligence reports publicly when we perceive substantial industry and public benefit in doing so.

A biochar strategy report is planned for release in Oct/Nov of 2024. A report exploring synthetic fuel pathways will also be shared in early 2025.

THE POTENTIAL FOR METHANE PYROLYSIS IN B.C. (APRIL 2024)

Exploring opportunities in production and deployment of low carbon hydrogen in B.C. and beyond, including the potential to leverage existing energy systems in B.C. CICE produced this report in partnership with Orion Projects and Sky Point Resources.



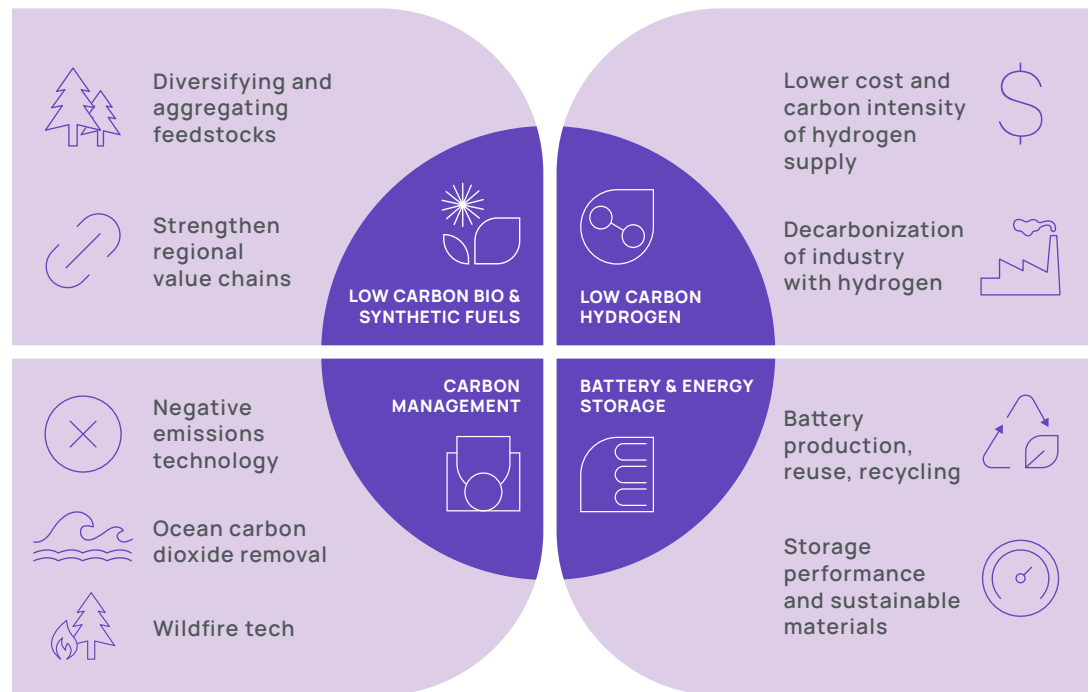
POWERING THE FUTURE WITH ENERGY STORAGE (MAY 2024)

Exploring how advancements in energy storage can facilitate higher levels of renewable energy adoption. This report was written in collaboration with Michael Delage.



2024-25 emerging innovation themes

With a focus on leading intelligence-driven “big impact” innovation, CICE is conducting in-depth research, consultation, and scoping to support technologies and solutions with the potential to redefine our world in the following areas:





“

This project funded by CICE is of paramount importance to Mangrove Lithium, as it marks a key step in transitioning our innovative gas diffusion electrode technology from the lab to real world application. Scaling up to a continuous roll-to-roll process is vital to meet the demand for electrodes in our inaugural lithium refining facility and future plants – enabling us to help meet the global demands for battery-grade lithium.”

DAVID NOVITSKI, DIRECTOR OF GOVERNMENT RELATIONS AND FUNDING AT MANGROVE LITHIUM

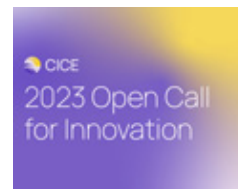
Converging on investment

Securing early-stage funding and partnerships is challenging, but CICE helps bridge B.C.'s seed investment support gap.

In 2023-24, CICE tripled its innovation calls, drawing 190+ expression of interest applicants and expanding our investment portfolio by \$19.1 million to surpass \$22.4 million.

This expansion includes a new funding avenue for emerging B.C.-based ventures that recently graduated from university entrepreneurship programs. Additionally, CICE launched innovation calls targeting market demands for wood waste management and enhancing wildfire resilience, as well as a call focused on measuring, monitoring, and verifying (MMV) carbon emission reduction, removal, and avoidance.

As a leading early-stage climate investor, CICE matches the urgency of start-up companies by funding faster than traditional venture capital funds and government initiatives. Our expedited, rigorous non-dilutive investment decisions are typically made in under 160 days, supported by third-party experts and our internal team.



OPEN INTAKE
JAN – JUNE 2023



**MMV OF CARBON
MANAGEMENT**
JUNE – OCT 2023



**FORESTRY RESIDUE
MANAGEMENT**
JUNE – OCT 2023



UNIVERSITY CALL
JAN – MAY 2024

2023-24 funding through calls for innovation

CALLS FOR INNOVATION FOCUS	DATES	APPLICANTS	PROJECTS FUNDED	TOTAL CICE INVESTMENT	TOTAL PROJECT VALUE
2023 open call intake	January – June 2023	101	9	\$5.2M	\$19.7M
Measuring monitoring and verification of carbon management	June – October 2023	33	4	\$2.8M	\$12.2M
Forest residue management	June – October 2023	47	4	\$2.6M	\$36.7M
University venture programs	January – May 2024	12	2	\$150K (to be funded in FY 2024-25)	N/A
January 2024 open call intake	January – June 2024	169	9	\$7.6M	\$25.6M

An additional \$9 million was invested in 2023-24 through follow-on project funding for scale-up and an ongoing intake for market-based innovation.



“

CICE's growing influence in the clean energy market gave Hydron access to significant sources of commercial relationships to help us and other member companies collaborate on related commercialization opportunities across the country. This incredible program enabled us to be noticed by other interested parties. Modern Niagara's equity investment in Hydron was after the CICE announcement.”

SOHEIL KHIAMI, PRESIDENT AND CEO OF HYDRON ENERGY INC.

Planned calls for innovation

In FY 2024-25, CICE plans to commit up to \$32 million in non-dilutive investment through a combination of broad innovation intakes and targeted calls. This includes a province-wide call for wildfire technology to combat the surges in destructive wildfires that are fueling record global emissions and threatening community safety, prosperity, and well-being. Additionally, follow-on funding will be provided to support future scaling. These efforts align with our goal to catalyze investment and overcome barriers to funding early-stage innovation.

CALLS FOR INNOVATION FOCUS	DATES
University venture programs	January – May 2024
January 2024 open call intake	January – June 2024
Wildfire tech call	May – November 2024
July 2024 targeted call intake	July – November 2024
Follow on project funding for scale-up + ongoing intake for market based innovation	Ongoing



OPEN CALL
JAN – JUN 2024



WILDFIRE TECH
MAY – NOV 2024



TARGETED CALL
JUL – NOV 2024



“

We gratefully acknowledge CICE's support for our progress toward providing the large-scale non-lithium energy storage a net-zero world demands. Mistral will highlight Vancouver, B.C.'s unmatched capabilities in electrochemistry and Invinity's deep expertise in Vanadium Flow Batteries. We're tremendously excited at the progress we're making toward changing the world of stationary energy storage, further accelerated by the award from CICE.”

LARRY ZULCH, CHIEF EXECUTIVE OFFICER AT INVINITY ENERGY SYSTEMS

Converging on community

The British Columbia cleantech community is among the strongest in the world. CICE is working to enhance the province's innovation value-chain and promote equitable and diverse participation in the low carbon economy. Over the past year, CICE increased our audience reach to over 32,000, grew our social media following by 75%, and participated in events like the Natural Resources Forum, Globe Forum and Carbon Removal Day. We appreciate the community's support in nominating CICE as the "Funder of the Year" at Foresight's 2024 B.C. Cleantech Awards.



CONVENING AT CICE CONVERGE 2023

CICE Converge 2023 was a landmark event, gathering over 150 innovators, industry leaders, academia, Indigenous rights holders, investors, venture builders, government, and regional community partners. This event fostered connections and celebrated B.C. innovators leading the clean energy future. Collaborative efforts from this climate-first community are helping B.C. accelerate cleantech adoption, attract investment, and lead a clean economy.



We are fortunate to be in a province that is actively participating in the clean energy transition, enabling the industry to fuel the drive towards hydrogen. CICE support has been helping HTEC continue the work on several exciting hydrogen projects that will help the province meet its decarbonization targets.”

COLIN ARMSTRONG, PRESIDENT AND CEO OF HTEC

MOBILIZING PUBLIC AND PRIVATE SECTOR COLLABORATION

In 2023-24, CICE facilitated three roundtables on B.C.’s advancements in battery and energy storage (Minister Jonathan Wilkinson, Minister Brenda Bailey), MMV (Minister Josie Osborne), and forest residue management (Minister Bruce Ralston). These roundtables brought together top changemakers to share successes, obstacles, and ideas to prime market readiness and accelerate the uptake of technologies that generate good jobs, establish global leadership, and attract investment.

MINISTER JONATHAN WILKINSON AND MINISTER BRENDA BAILEY WITH PARTICIPANTS OF A BATTERY AND ENERGY STORAGE ROUNDTABLE AT THE ELECTRICITY AND THE GRID ANNOUNCEMENT ON AUGUST 8, 2023.



OPENING DOORS TO PUBLIC AND PRIVATE INVESTMENT

In 2023-24, CICE catalyzed early-stage investment – mobilizing a combined valuation of \$139 million in project funding and \$46 million in additional investment. We established strong partnerships with other non-dilutive investment providers, including PacifiCan, Clean Energy B.C. and Innovate B.C. CICE also engaged 39 public and private funders representing \$1.3B in potential capital to catalyze the scale-up of decarbonization projects. We work with venture builders focused on accelerating cleantech innovation through mentorship, training, and collaboration, including the B.C. Tech Association, Foresight Canada, and Mitacs.

MINISTER JOSIE OSBORNE, MINISTER TERRY BEECH, AND CICE CEO SARAH GOODMAN JOINED BY INVESTORS TO SUPPORT THE LAUNCH OF SFU’S CLEAN ENERGY HUB.



2024-25 community initiatives

In 2024-25, CICE will continue enabling a dynamic community dedicated to decarbonization. Building community alignment and collaboration between innovators, industry leaders, academia, Indigenous rights holders, investors, venture builders, government, and regional community partners is critical to bridging the early-stage support gap and accelerating the adoption and scaling of B.C. cleantech innovation.

ACTIVATING B.C.'S CLIMATE-FIRST COMMUNITY NETWORK

CICE will continue to be active on the cleantech and venture speaking circuits, attending targeted events such as Natural Resources Forum, and Web Summit Vancouver to shine a spotlight on our growing portfolio of innovators. Community-first events like CICE Converge and others that align with our targeted innovation focus areas will be leveraged to engage with changemakers and deepen the conversations around industry decarbonization. CICE will also host government and industry round tables to advance the commercialization of B.C.'s most promising clean energy and climate solutions.

SCALING GLOBAL CONNECTEDNESS – WHILE KEEPING IP IN B.C.

Climate change crosses borders, and B.C. solutions must too. As part of our goal to scale B.C. companies through global connectedness, CICE is working to educate innovators on the importance of IP protection strategies and the benefits of keeping the intellectual assets and critical human resources in B.C. We are also engaging with Canada's international economic development offices that align with our innovator's global export and investment initiatives.

REFINING HOW WE CREATE VALUE

CICE is starting to plan new future funding pathways. We are analyzing the value we provide to our public and private sector members and our community of climate innovators, exploring enhancements to our approach.

Our goal is to better support innovators and ensure CICE's long-term sustainability, while staying focused on boosting B.C.'s competitive advantage in clean energy and climate technology. During 2024-2025, CICE's board and leadership team will refine these options, seeking input from our members and community of innovators.



“

This award is instrumental in helping us assess the commercial viability of the biofuel and bioenergy market, which in turn is expected to overwhelmingly benefit rural, underserved communities.”

KEVIN KUNG, CO-FOUNDER AND CTO OF TAKACHAR

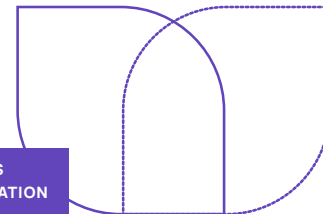
Our commitment to equity, diversity, and inclusion

CICE's commitment to equity, diversity and inclusion extends beyond statistics to all facets of our operations and interactions. We prioritize investment into clean energy and climate solutions that have significant co-benefits such as promoting ecosystem restoration and biodiversity conservation, empowering Indigenous environmental stewardship and land management practices, and enhancing community resilience and socio-economic benefits.

DIVERSITY PLAYS A CRITICAL ROLE IN DRIVING INNOVATION IN B.C.:

28%

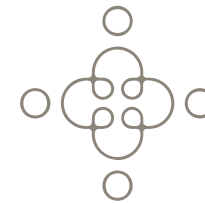
OF 2023-24 FUNDED COMPANIES INCLUDE INDIGENOUS PARTICIPATION



64%

OF FUNDED 2023-24 PROJECTS LED BY BC-BASED STARTUPS

68%



OF MANAGEMENT & LEADERSHIP TEAMS IN FUNDED 2023-24 PROJECTS COMPOSED OF INDIVIDUALS FROM UNDERREPRESENTED GROUPS INCLUDING WOMEN, INDIGENOUS PEOPLES, AND OTHER EQUITY DESERVING GROUPS.

Our board



DAN WOYNILLOWICZ
CICE BOARD CHAIR &
PRINCIPLE OF POLARIS
STRATEGY + INSIGHT



ANDREA BRECKA
VP OF FLEET SOLUTIONS
AMERICAS –
SHELL CANADA LTD.



ALAN WINTER
FORMER B.C. INNOVATION
COMMISSIONER AT B.C.
PROVINCIAL GOVERNMENT



SUSAN KOCH
FORMER COO & VP
ACCOUNTING – CARBON
ENGINEERING LTD.

Our advisors



SHARLEEN GALE
CHIEF OF FORT NELSON
FIRST NATION



PAUL AUSTIN
PARTNER, INDUSTRIAL AND
CLIMATE TECHNOLOGY –
FORT CAPITAL PARTNERS



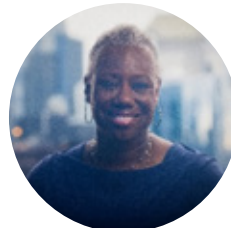
MARK ZACHARIAS
EXECUTIVE DIRECTOR –
CLEAN ENERGY CANADA



LORI ACKERMAN
PARTNER – MYRIAD
CONSULTING INC.



KATYA RHODES
ASSISTANT PROFESSOR,
SCHOOL OF PUBLIC
ADMINISTRATION –
UNIVERSITY OF VICTORIA



HEATHER CAMPBELL
ADVISOR – REV
INNOVATIONS



STEVEN MACDONALD
PRINCIPAL AT +SM



Land acknowledgement

In the spirit of reconciliation, the B.C. Centre for Innovation and Clean Energy respectfully acknowledges that it operates on the traditional, ancestral and unceded territories of the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and səliłwətaʔ (Tseil-Waututh) Nations.



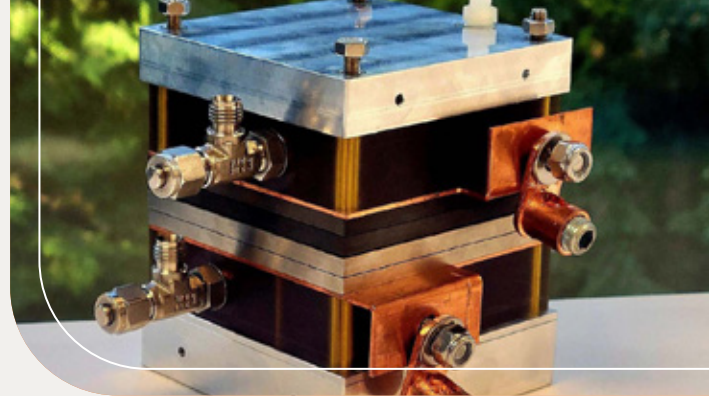
Impact stories



PROJECT NAME: EZ-METHANOL

CICE FUNDING: \$600,000

TOTAL PROJECT FUNDING: \$1,531,357



Decarbonizing the chemicals industry for a climate positive future

One of the toughest sectors of the economy to decarbonize, the \$6 trillion chemicals industry is responsible for roughly 10% of global energy consumption and 20% of all industrial GHG emissions. Anodyne Chemistries is addressing this challenge by building the world's first industrial bio-electric technology platform to create pure carbon negative chemicals and low carbon fuels such as formic acid, formaldehyde, and methanol. This is done using nothing but carbon dioxide, water, and renewable electricity.

Anodyne's innovative chemical synthesis process employs patented engineered enzymes, known as Anozymes™, instead of metal catalysts. This allows the production of high yield, high purity products at room temperature, without greenhouse gas emissions.

With investment support from CICE, Anodyne developed its first enzymatically produced chemical, EZ-Methanol, demonstrating how their low carbon process drives down costs, improves safety and transforms CO₂ waste into new revenue streams.

Anodyne recently secured additional funding from Natural Products Canada and successfully closed a \$6 million seed capital round to further scale its carbon utilization technology and decarbonize the chemicals industry.



CICE is dramatically accelerating our product development, talent acquisition, and access to capital. It provides the perfect environment for Anodyne to grow and deliver carbon reductions through low carbon fuels and chemicals that will decarbonize a wide range of manufactured and exported products."

IAIN EVANS, CEO OF ANODYNE CHEMISTRIES



PROJECT NAME: GRID-SCALE SUPERCAPACITOR ENERGY STORAGE SYSTEM (GSSESS)

CICE FUNDING: \$750,000

TOTAL PROJECT FUNDING: \$4,452,435



Keeping the lights on for Canadians

Grid reliability presents a significant challenge in our transition to clean energy. Last winter, a cold snap in Alberta brought temperatures to minus 45 degrees Celsius, prompting an emergency alert for 4.1 million Albertans to “conserve power immediately” as the electricity system teetered just 50 megawatts away from rolling blackouts.

The root cause of this problem lies in sustaining the system inertia and primary frequency response needed to handle load spikes or sudden reductions in power generation. As Canada and the world shift to variable renewable energy sources such as solar and wind, this challenge becomes increasingly common. These renewables are susceptible to disruptions like cloud coverage or sudden wind lulls, lacking the stabilizing inertia of thermal generators.

To secure grid reliability and resilience, Abbotsford-based Atlas Power Technologies is pioneering grid-scale supercapacitor energy storage systems (SC-ESS). These systems play a vital role in power grid stabilization, backup, and peak demand power shaving. The Atlas system swiftly bridges the gap before hydro power kicks in, delivering high power immediately after detecting a

spike or reduction in power generation. The Atlas system meets critical grid criteria that includes more than 5 MW of output, a frequency response within 300 milliseconds or less, and a storage duration of one hour.

With investment from CICE, Atlas has successfully built and field-tested an affordable, grid-scale SC-ESS proof-of-

concept unit to showcase its readiness for adoption. This achievement led to the launch of the world's largest grid-scale supercapacitor project in partnership with TransAlta, Canada's leading investor-owned renewable energy provider. Supported by an additional \$6.5 million grant from Emissions Reduction Alberta, this project marks a significant step towards a more reliable and resilient energy future.



This project is critical in the commercialization of Atlas Power Technologies' supercapacitor energy storage systems. It provides a field-deployed and operational grid-system, allowing Atlas to pursue sales and partnerships with utilities and project developers in a traditionally conservative and risk adverse industry..."

MITCH MILLER, CEO OF ATLAS POWER TECHNOLOGIES INC.



Lheidli T'enneh



PROJECT NAME: LHEIDLII T'ENNEH SLASH TO SAF

CICE FUNDING: \$847,983

TOTAL PROJECT FUNDING: \$1,723,676



Partnering to boost community resilience and improve the health of the forest

Escalating wildfire threats across B.C. have heightened focus on forest residues and the importance of removing excess fuel from ecosystems to reduce risk. However, managing forest residues has historically been challenging due to the commercial difficulties of collection, transportation, and material quality. Collecting slash and thinnings is currently too expensive, and there is no market that can bear the true cost of utilizing these residues. The Lheidli T'enneh First Nation and its partners believe in the importance of solving this challenge.

The Lheidli T'enneh First Nation holds the largest First Nations Woodland License in northern B.C. In partnership with Arbios Biotech, Canfor, and LTN Contracting (a forest company wholly owned by the Lheidli T'enneh First Nation), they are focused on generating renewable bio-oil from forest residues, which will be upgraded to sustainable aviation fuel (SAF) and other low carbon renewable transportation fuels. This comprehensive solution encompasses collection, transport, evaluation, conversion, and testing. Once operational, the project will utilize the world's largest woody biomass hydrothermal liquefaction (HTL) facility: the Arbios

Biotech Chuntoh Ghuna facility in Prince George. The name Chuntoh Ghuna, meaning "the forest lives," was chosen by the Lheidli T'enneh community and its elders. The vision is to advance a climate solution using underutilized forest residues to create high value renewable biofuels, resulting in long term skilled jobs.

This CICE supported project spans from residue assessment to SAF production testing. The objective is to demonstrate the feasibility of collecting and processing forest residuals while building a robust business case for scaling this initiative within British Columbia and beyond, ultimately proving an effective, low carbon pathway for production of SAF and reduction of wildfire risk.



As a Nation, Lheidli T'enneh believes strongly in proper management of our natural habitats, communities, and resources. While wildfire risks escalate throughout British Columbia, we understand the value partnerships like these hold in the removal of excess fuel from the forest floor. As holders of the largest First Nations owned woodlot in B.C., it is our responsibility to source and engage in partnerships that assist in developing rigorous forest practices for years to come."

CHIEF DOLLEEN LOGAN, ON BEHALF OF LHEIDLII T'ENNEH FIRST NATION



PROJECT NAME: MANUFACTURING, SCALING, AND FIELD-DEPLOYMENT OF NOVEL PROXIMAL SENSORS TO MEASURE SOIL HEALTH

CICE FUNDING: \$1,000,000

TOTAL PROJECT FUNDING: \$6,400,000



Transforming the way we measure, monitor, and verify soil carbon

Traditional soil lab analysis that underpins precision agriculture and trust in carbon markets is expensive, slow, and often incomplete. Fields are not sampled frequently or at the scale needed to provide accurate, full field results. Currently, only 20% of US farmland is tested – at a lag time of every 3-5 years. Lab analysis is notoriously sluggish, often involving harmful and toxic chemicals, and lacking the measurement of carbon sub-pools required to estimate permanence of sequestration. Miraterra is revolutionizing soil carbon

measurement using novel proximal sensing technology that unlock fast, accurate, and affordable complex materials analysis for soil testing labs. Its Raman spectroscopy sensors provide near instantaneous measurement of soil pH, soil organic carbon, organic matter percentage, and importantly, carbon contained in sub-pools of organic matter. This helps farmers better understand what’s happening in their soil so they can continue to feed the world and be a part of the solution to climate change.

With investment from CICE, Miraterra is advancing an in-house solution that was built in partnership with Dr. Ed Grant and his spectroscopy lab at the University of British Columbia, to a commercialized solution that can scale and be deployed in more places faster.

Following CICE’s catalytic investment in October 2023, Miraterra announced the close of its seed funding round in May 2024, marking a pivotal moment in the company’s mission to transform soil insight.



We are excited to work with CICE on a project with the potential to revolutionize soil carbon monitoring, reporting and verification (MRV). We are manufacturing the first prototypes of our novel sensor in-house, right here in B.C. With \$1 million from CICE and a proposed total project cost of \$6.4 million, we can advance our sensor development and get the technology into the hands of customers, transforming soil carbon MRV.”

TRAVIS GOOD, CHIEF TECHNOLOGY OFFICER AT MIRATERRA



SIMON FRASER UNIVERSITY

PROJECT NAME: SFU'S CLEAN HYDROGEN HUB
CICE FUNDING: \$1,500,000
TOTAL PROJECT FUNDING: \$22,000,000



Mobilizing B.C.'s hydrogen community to collectively scale clean energy solutions

The demand for clean energy options is on the rise. By 2050, the hydrogen economy is projected to represent trillions of dollars annually and supply 12 per cent of global energy needs.

Canada's Hydrogen Strategy positions the nation as a leading supplier of hydrogen and related technologies, with British Columbia hosting the country's largest industry cluster. Located on the Burnaby campus, SFU's Clean Hydrogen Hub harnesses the strengths and strategies of both Canada and B.C., positioning the province as a global leader in clean hydrogen technology and products. Collaborative advancements emerging from the Clean Hydrogen Hub include:

- » An at-scale testbed to co-develop products and technologies aimed at lowering clean hydrogen costs, decarbonizing Canada, and increasing global exports.
- » On-site clean electrolytic hydrogen production using anion exchange membrane water electrolysis technologies.
- » Development of low-cost anion-exchange membrane water electrolysis technology based on breakthrough membrane technology developed by SFU spinoff, Ionomr Innovations.

» The piloting of clean energy solutions related to industries such as heavy-duty transport, off-grid energy generation, and industrial manufacturing.

SFU's Clean Hydrogen Hub leverages the university's leadership in clean hydrogen research and industry partnerships, demonstrating community-centred climate innovation in action. Founding investment partners

include Pacific Economic Development Canada, SFU, the B.C. Ministry of Energy, Mines and Low Carbon Innovation (through the Innovative Clean Energy Fund), City of Burnaby, FortisB.C., and CICE. Support has also come from Canadian partner companies and organizations. By 2028, the SFU Clean Hydrogen Hub is forecast to support \$104 million in revenue growth and \$92 million in export sales.

“ SFU's Clean Hydrogen Hub represents community-centred climate innovation in action. We are thrilled to partner with industry leaders, organizations and all three levels of government to develop the clean energy technologies that Canada and the world needs. The social and environmental impacts of a thriving Canadian hydrogen economy have the potential to be transformational.”

DUGAN O'NEIL, VICE-PRESIDENT RESEARCH AND INTERNATIONAL AT SIMON FRASER UNIVERSITY