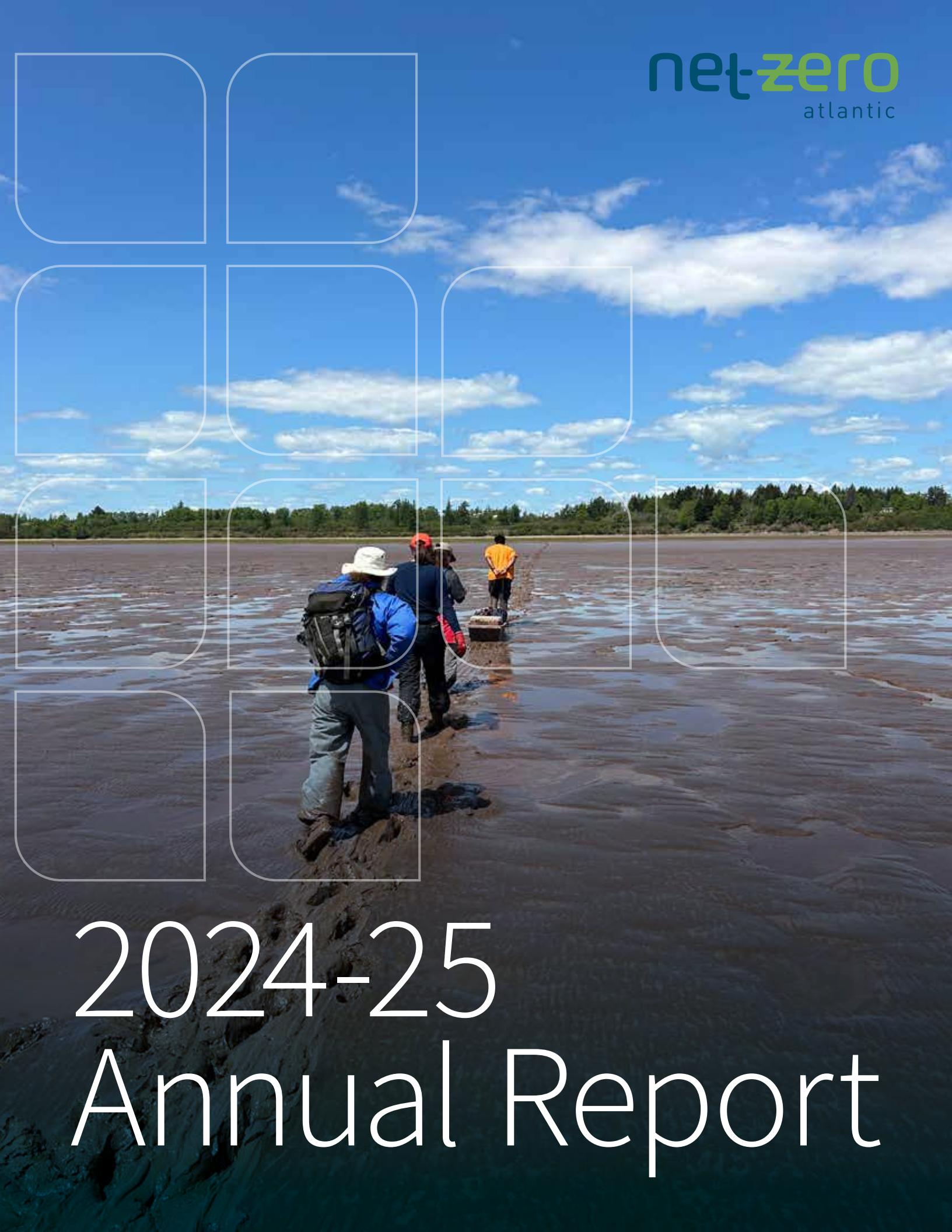
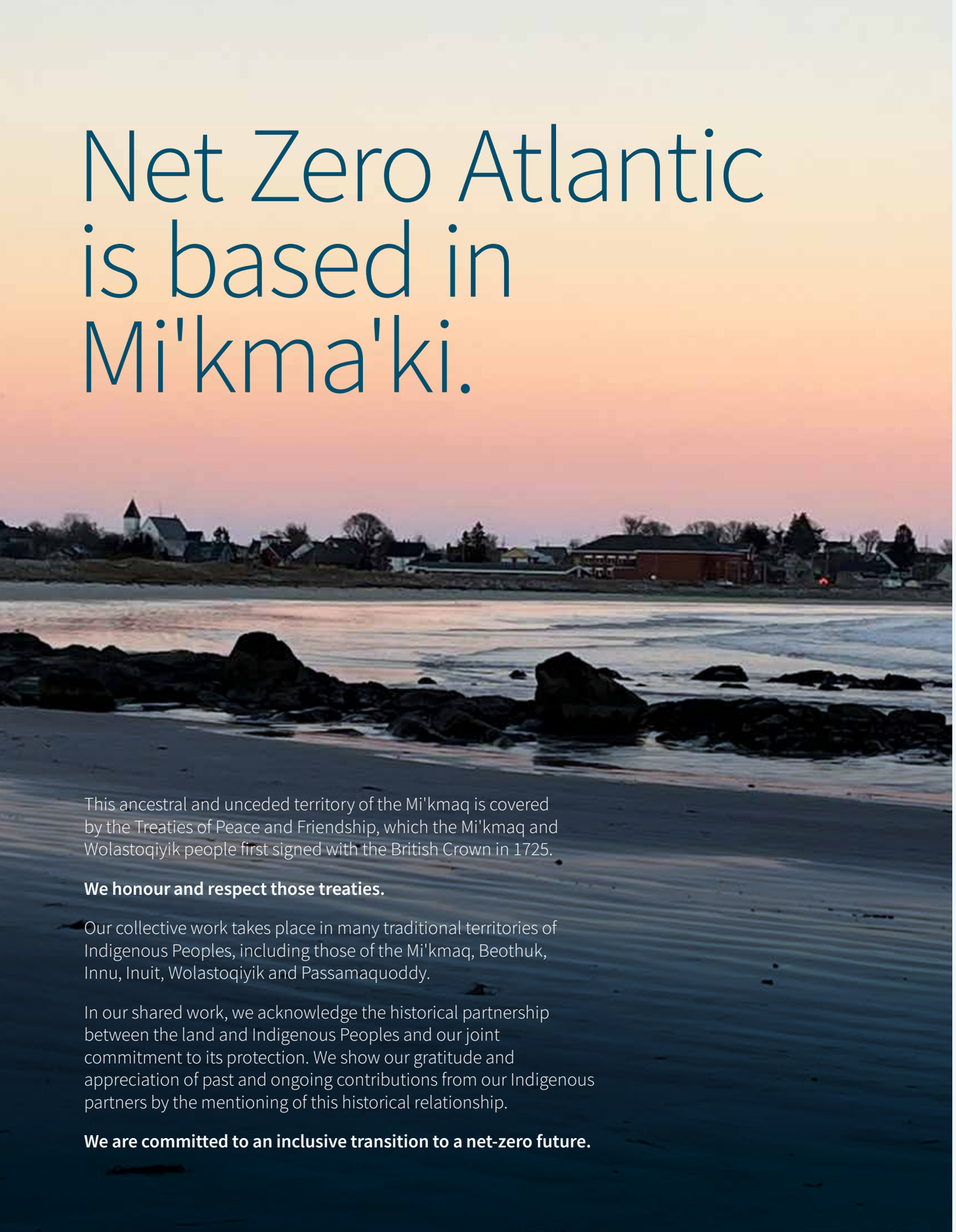
net-zero atlantic



2024-25 Annual Report

Net Zero Atlantic is based in Mi'kma'ki.



This ancestral and unceded territory of the Mi'kmaq is covered by the Treaties of Peace and Friendship, which the Mi'kmaq and Wolastoqiyik people first signed with the British Crown in 1725.

We honour and respect those treaties.

Our collective work takes place in many traditional territories of Indigenous Peoples, including those of the Mi'kmaq, Beothuk, Innu, Inuit, Wolastoqiyik and Passamaquoddy.

In our shared work, we acknowledge the historical partnership between the land and Indigenous Peoples and our joint commitment to its protection. We show our gratitude and appreciation of past and ongoing contributions from our Indigenous partners by the mentioning of this historical relationship.

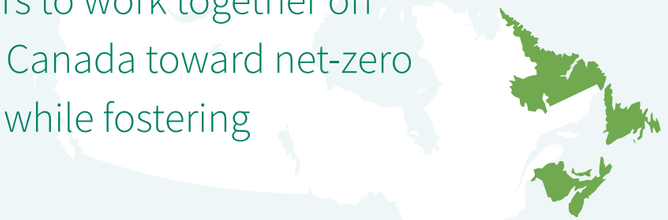
We are committed to an inclusive transition to a net-zero future.

NET ZERO ATLANTIC

We encourage growth of a sustainable energy sector by identifying knowledge gaps, connecting experts to projects, and leading applied research and innovation.

- **Offshore Wind**
- **Clean Technology**
- **Electricity**
- **Net-Zero Buildings**
- **Carbon Management**
- **Fuels**

Our focus is on credible and objective research and projects that will prepare policymakers, industry leaders, and sector investors to work together on pathways to move Atlantic Canada toward net-zero greenhouse gas emissions while fostering economic opportunity.



VISION

Net Zero Atlantic will be a leading energy research organization advancing Canada's transition to a carbon-neutral society.

MISSION

To lead applied research and contribute to projects that enable the transition of Atlantic Canada's energy system to a carbon-neutral future through collaboration with academia, governments, private sector, Indigenous Peoples and other non-government organizations.

PURPOSE

To advance a sustainable and inclusive transition to a carbon-neutral Atlantic Canada through the provision of credible and objective data and support services.

We are enabling informed action.

20
FUNDERS

120
REPORTS

787
CONTRIBUTORS AND PARTNERS

58
ECT RECIPIENTS

15 WEBINARS
1,218 WEBINAR REGISTRANTS

32 EVENTS
1,124 EVENT REGISTRANTS

13,487
SUBSCRIBERS & FOLLOWERS

154k
ACTIVE USERS OF NETZEROATLANTIC.CA

17
years of energy and environmental research

AT THE END OF THE 2025 FISCAL YEAR

394
Total research projects to date

$61M
Total funded research projects

$91.5M
Total funded + leveraged + in-kind

“It’s fair to say that there has been a lot of change in Canada and the world over the past year. However, the goal of a net-zero Atlantic Canada with no one left behind remains constant. As our Annual Report shows, we’re contributing to that goal in many areas. All that we’ve accomplished in the past year is due to collaboration with academia, governments, the private sector, Indigenous Peoples, and other non-government organizations. We thank everyone for the skill, knowledge, and energy that they have contributed to our energy transition.”
—Alisdair McLean, CEO, Net Zero Atlantic

Staff sitting on the stairs at the PIER

Enabling conditions for action in

Offshore Wind

As nation-building projects are being defined by the Canadian federal and provincial governments, Atlantic Canada is increasingly attracting attention. The region's potential to produce renewable electricity from offshore wind is now recognized not only for its potential local benefits but also as a valuable national energy resource. Our assessments and engagements are helping Atlantic Canada turn ambition into action.

OFFSHORE WIND

Net Zero Atlantic plays a leading role in advancing offshore wind development in Atlantic Canada. Through research, collaboration, and engagement, Net Zero Atlantic supports responsible, science-based decision-making and accelerates the sustainable development of offshore wind in our region.

12 REPORTS

157 CONTRIBUTORS

83 PRESENTATIONS

738 REGISTRANTS

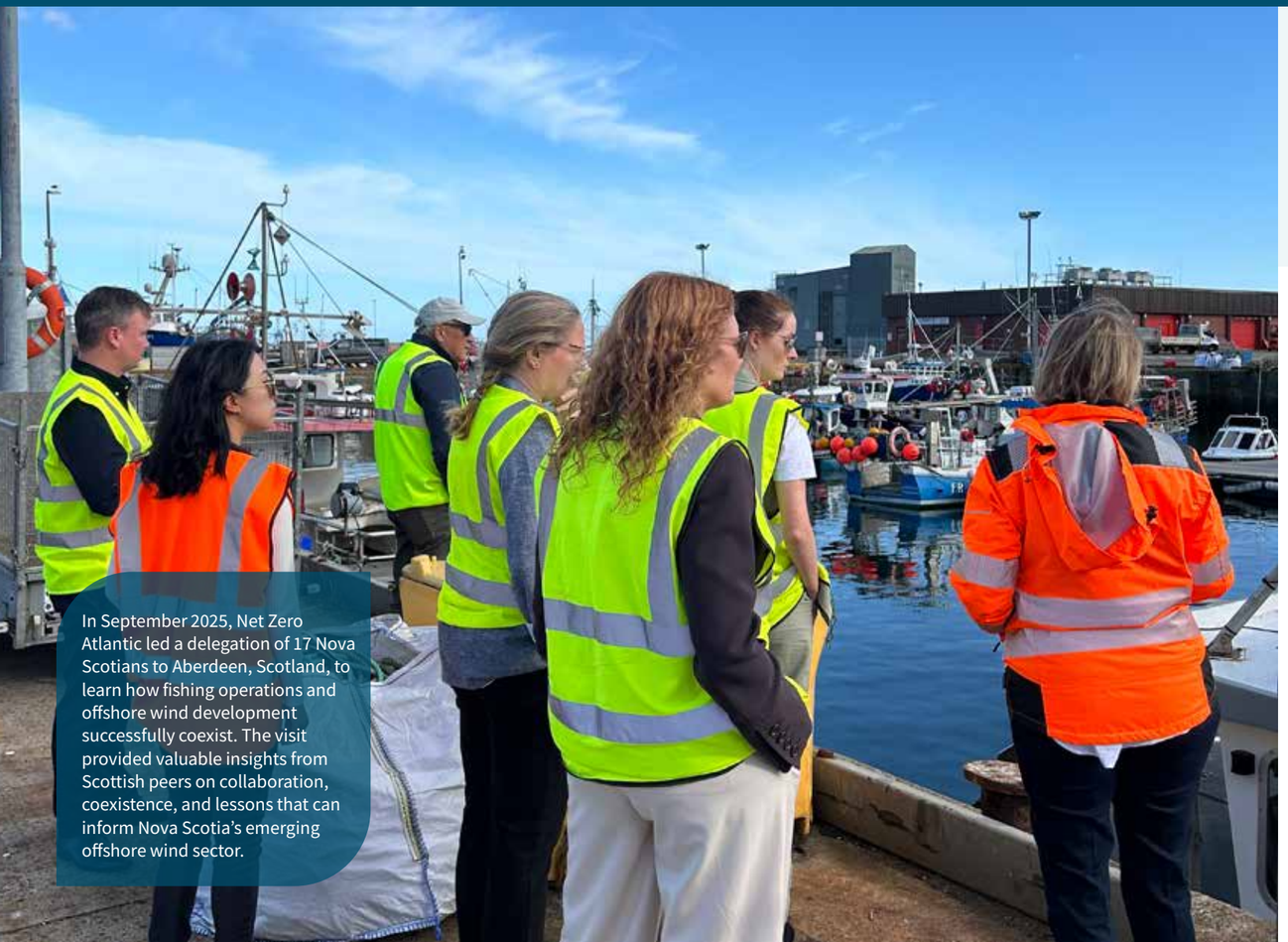
12 EVENTS

37,695 IMPRESSIONS

39 LINKEDIN POSTS

$3.0M FUNDING FOR 24/25FY

43,050 people visited netzeroatlantic.ca to access information on offshore wind.



In September 2025, Net Zero Atlantic led a delegation of 17 Nova Scotians to Aberdeen, Scotland, to learn how fishing operations and offshore wind development successfully coexist. The visit provided valuable insights from Scottish peers on collaboration, coexistence, and lessons that can inform Nova Scotia's emerging offshore wind sector.

"Advancing the sustainable development of the offshore wind sector will require a strategic and coordinated R&D response. Achieving this goal will require coordinated investment and a strong foundation of applied research and innovation across Atlantic Canada."
—Sven Scholtysik, Director of Research, Net Zero Atlantic

OFFSHORE WIND GRID INTEGRATION

Together with provincial governments and local utilities, we are advancing research on how offshore wind can be reliably and efficiently integrated into Atlantic Canada's electricity system. This work supports regional planning for future transmission infrastructure.

OFFSHORE WIND PORTS

The Offshore Wind Ports study identified 10 port locations in Atlantic Canada that have the potential to act as primary hubs for offshore wind development. The project provides insights that can help guide strategic investment into port infrastructure.

OFFSHORE WIND R&D PROGRAM

Accelerated sustainable development of offshore wind requires strategic and coordinated R&D that aligns with political and industrial priorities. The Strategic Offshore Wind R&D Plan for Nova Scotia identifies R&D activities, budget estimates, and timeline estimates and helps to enable offshore wind development at a lower cost, with less risk and higher predictability.

Funding by Natural Resources Canada, Canada's Ocean Supercluster, Nova East Wind, Simply Blue Group, and Northland Power, Nova Scotia Department of Energy.

Enabling conditions for action in

Electricity

Atlantic Canada faces unique opportunities and challenges in the energy sector. Evaluating what renewable energy resources are viable for development in the region and examining how these resources may be utilized are immediate priorities. Through modelling, engagement, and resource assessment, we are creating enabling conditions for the energy system transition.

ELECTRICITY

Net Zero Atlantic advances evidence-based electricity system planning through energy modelling and analysis that informs policy, infrastructure, and technology decisions to enable Atlantic Canada's energy transition.

16 REPORTS
11 PROJECTS

160 CONTRIBUTORS

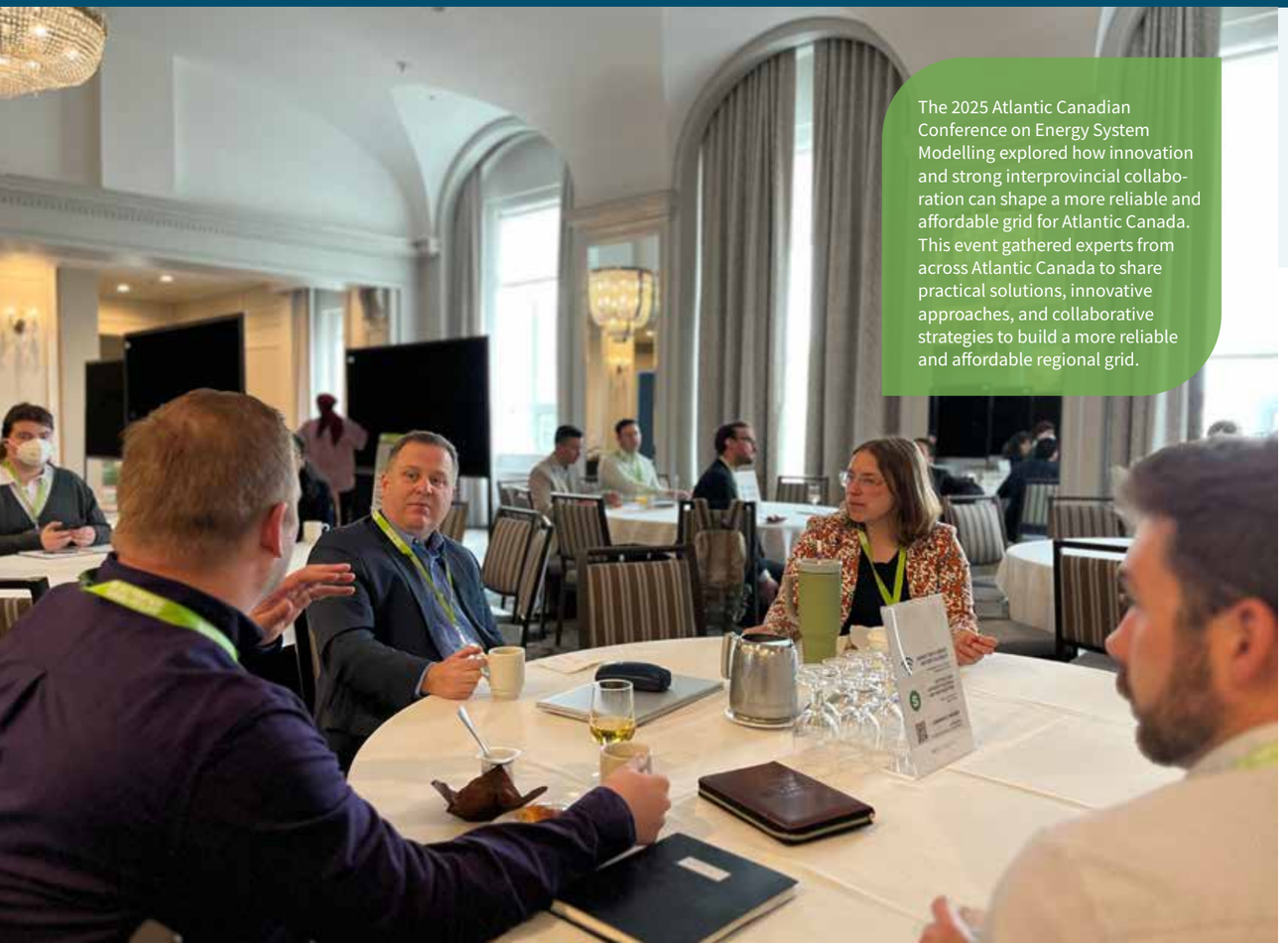
141 PRESENTATIONS

1,051 REGISTRANTS
20 EVENTS

20,977 IMPRESSIONS
23 LINKEDIN POSTS

$2.0M FUNDING FOR 24/25FY

1,865 people visited netzeroatlantic.ca to access information on energy system modelling.



The 2025 Atlantic Canadian Conference on Energy System Modelling explored how innovation and strong interprovincial collaboration can shape a more reliable and affordable grid for Atlantic Canada. This event gathered experts from across Atlantic Canada to share practical solutions, innovative approaches, and collaborative strategies to build a more reliable and affordable regional grid.

"Through our modelling, we're uncovering new insights into how technologies, policies, and behaviours can work together to transform our electricity system — both, from a provincial, regional and interregional perspective."
—Sven Scholtysik, Director of Research, Net Zero Atlantic

ACES AND MULTI MODEL COMPARISON

Net Zero Atlantic continues to maintain and enhance the Atlantic Canada Energy System (ACES) Model, a cornerstone tool for regional energy system planning. Through partnering on the federal Energy Modelling Hub's multi-model comparison forum, we ensure that open-source models are calibrated and aligned on common assumptions for key policy topics.

WINTER PEAK DEMAND MITIGATION

Working with local utilities, governments, and research institutions (e.g., IET), Net Zero Atlantic is analyzing ways to reduce winter peak demand through hybrid heating technologies and demand-side management. The projects combine technical modelling with real-world data to identify practical solutions that support grid reliability and affordability.

HEAVY-DUTY VEHICLE DECARBONIZATION

In partnership with the University of Toronto, the University of Waterloo, and the University of Calgary, Net Zero Atlantic has started work to model pathways to decarbonize heavy-duty transportation across the region. This work assesses how the choice and rollout timing of emerging HDV technologies affect costs, emissions, infrastructure needs, and the broader energy system.

Funding by Natural Resources Canada, Environment and Climate Change Canada, Energy Modelling Hub, Nova Scotia Department of Energy, Government of New Brunswick, and Mitacs.

Enabling conditions for action in

Net-Zero Buildings

As the secretariate for Building to Zero Exchange (BTZx), Net Zero Atlantic supports efforts to reduce emissions from one of Atlantic Canada's largest sources: our buildings. Improving the performance of new and existing buildings is essential for meeting regional climate goals and strengthening our communities. Through training pathways, research, and sector-wide collaboration, BTZx is helping create the conditions for a net-zero built environment.

NET-ZERO BUILDINGS

Building Knowledge, Building Capacity, Building to Zero. BTZx is driving the transition to net-zero buildings.

22 REPORTS
11 PROJECTS

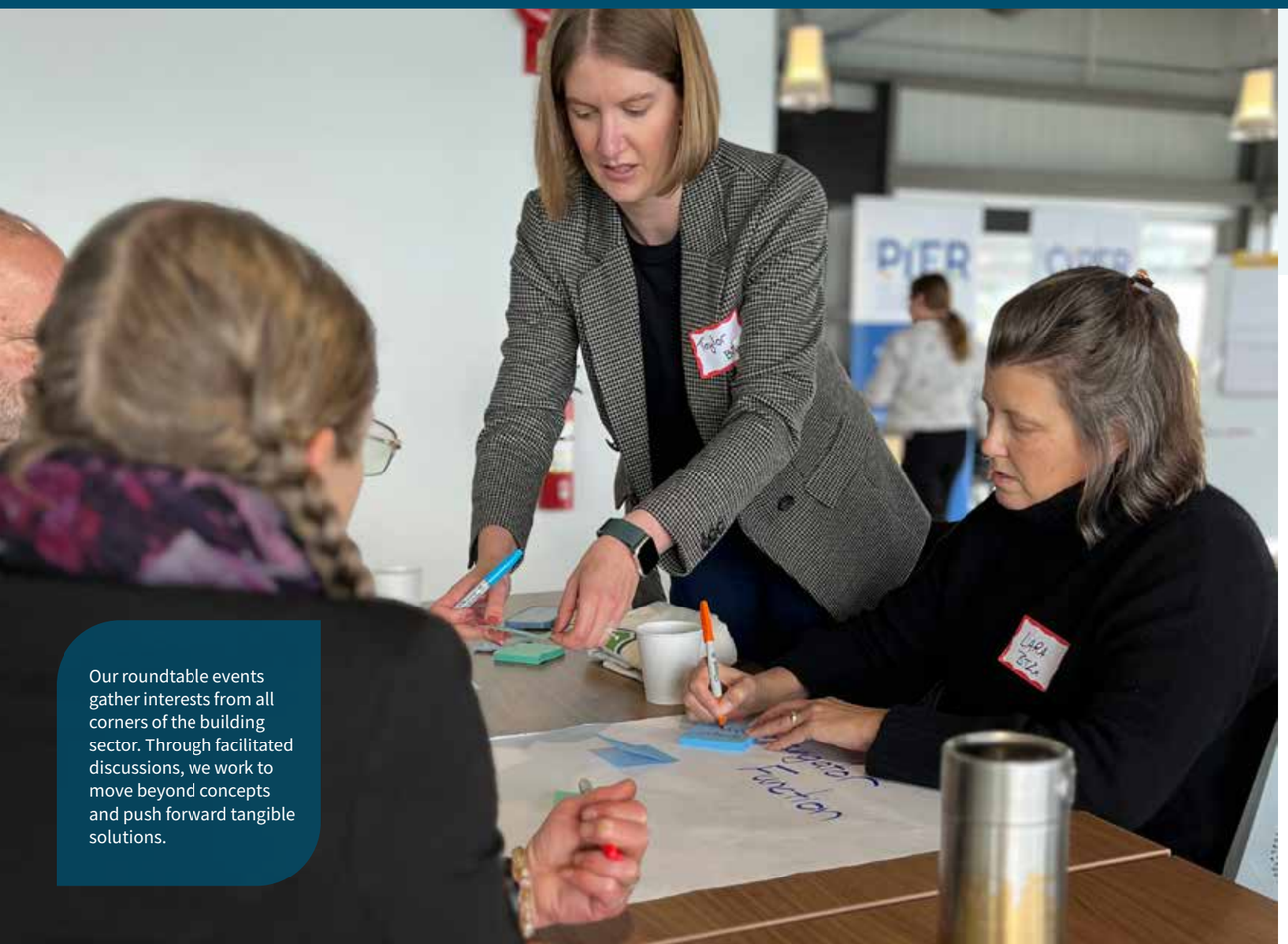
134 CONTRIBUTORS

33 PRESENTATIONS

226 REGISTRANTS
5 EVENTS

28,092 IMPRESSIONS
54 LINKEDIN POSTS

$1.0M FUNDING FOR 24/25FY



Our roundtable events gather interests from all corners of the building sector. Through facilitated discussions, we work to move beyond concepts and push forward tangible solutions.

"We are a broad and diverse network. Building owners and managers, policymakers and officials, engineers and architects, and trades people are all integral contributors. If we can insert a net-zero perspective into all of these spaces, all can participate. Net-zero buildings are possible — and better for us." *—Taylor Owen, Director of BTZx*

PILOT TRAINING PROGRAMS

This year, BTZx focused on building the foundation for sector-wide training. We developed a new course for Building Officials on the 2020 National Building Code's energy efficiency requirements and advanced programs for energy modellers, energy advisors, Integrated Design Process practices, Climate Literacy course adaptations, and retrofit navigators. Through strong partnerships and targeted needs assessments, we've set the stage for curriculum delivery and expanded training opportunities in the year ahead.

BUILDING MOMENTUM TOGETHER

Through our Action Accelerator series, BTZx brought together partners from across Atlantic Canada to identify barriers and co-design solutions for decarbonizing the built environment. This year's sessions included Retrofit Roundtables held in all four provinces with The ReCover Initiative, introducing participants to the benefits of deep retrofits and charting pathways to scale them. By convening diverse voices and turning dialogue into action, BTZx is fostering the collaboration needed to accelerate real progress toward net-zero buildings.

BUILDING SECTOR INSIGHTS

BTZx is advancing research to strengthen understanding of Atlantic Canada's net-zero building ecosystem. Through the Workforce Readiness Roadmap and Building Sector Asset Map projects, we are identifying the people, organizations, skills, and capabilities that will shape the region's transition to net zero buildings. The asset map, launching first in Nova Scotia, will serve as a dynamic, accessible resource, while the roadmap will guide future training and workforce growth priorities. Together providing the insight needed for coordinated sector growth.

Funding by Natural Resources Canada, Nova Scotia Department of Energy, and The ReCover Initiative.

BUILDING TO ZERO EXCHANGE

Enabling conditions for action in

Clean Technology

Many of the solutions needed to achieve Atlantic Canada's net-zero goals by 2050 must be invented, proven, and scaled. With Emerging Concepts and Technologies (ECT) Research Program, early-stage development and pre-commercialization investigations of concepts and technologies are now a part of the regional innovation ecosystem.

The Dalhousie University team led by Dr Dariia Atamanchuk is collecting a seawater sample to confirm the precision of state-of-the art sensors that are being developed and deployed as part of the ECT Program. This work is integral to the monitoring, reporting and verification required to ensure responsible carbon dioxide removal practices are being implemented and high quality carbon credits are produced

CLEAN TECHNOLOGY

Net Zero Atlantic is contributing to innovation and adoption by identifying knowledge gaps, funding promising ideas, encouraging collaborations, growing IP potential, and supporting networks to attract investment.

50 REPORTS
58 PROJECTS

112 CONTRIBUTORS

10 PRESENTATIONS

255 REGISTRANTS
6 EVENTS

22,998 IMPRESSIONS
35 LINKEDIN POSTS

$2.3M TO ECT RECIPIENTS IN 24/25FY

25,860 people visited netzeroatlantic.ca to access information on clean technology.

"The ECT funding enabled us to get to market significantly faster, helped us attract private investment, and allowed us to create additional high-quality jobs here in Atlantic Canada."
—Hunter King, Founder & CEO of Integrative Nanotech Inc.

ECT-NOVA SCOTIA

The 1st of 3 provinces to join ECT Research Program, ECT-NS has $3.6 million total dollars awarded, 38 projects supported, and 16 completed projects. Nova Scotia-based innovators are engaged, averaging 39 applications received per call in support of 8 priority research themes.

ECT-NEW BRUNSWICK

Joining the program in 2024, ECT-NB has awarded $1.1 million and 13 projects supported. These investments unlocked an additional $1.5 million in leveraged funds. An additional open call closed in November 2025, supported by a renewal of funding support for ECT-NB.

ECT-PRINCE EDWARD ISLAND

In 2025, ECT-PEI: Clean Technology Challenge joined the program with its first open research call in Spring 2025. To date, ECT-PEI has awarded a total of $400,000 for 4 projects. In PEI, the program is focused on 4 themes—the agricultural and marine sectors, grid modernization, and hydrogen as an alternative fuel.

Funding by Natural Resources Canada, Nova Scotia Department of Environment and Climate Change, Government of New Brunswick Climate Change Secretariat, New Brunswick Innovation Fund, Opportunities New Brunswick, and Innovation PEI.

Enabling conditions for action in

Carbon Management

While electrification with renewable energy sources and clean fuels are high-impact pathways for GHG emissions reductions, they alone cannot advance Atlantic Canada to net zero. Additional efforts are required. Carbon management is globally recognized as a collection of mitigation tools that can close the final gap.

CARBON MANAGEMENT

Net Zero Atlantic is contributing by mapping how Carbon Management will play a role in Atlantic Canada reaching net zero targets.

16 REPORTS
19 PROJECTS

150+ CONTRIBUTORS

2 PRESENTATIONS

25 REGISTRANTS
1 EVENTS

5,414 IMPRESSIONS
8 LINKEDIN POSTS

$2.7M FUNDING FOR 24/25FY

The University of New Brunswick ECT- NB team led by Dr. Myriam Barbeau standing in the mudflats of the Bay of Fundy in front of the carbon flux measurement platform. This work is quantifying the carbon sequestration potential of biofilm that grows on mudflats in Atlantic Canada and around the world. This research refines the understanding of the role natural systems play in carbon management.

"Atlantic Canada's terrestrial ecosystems, geological reservoirs, and marine systems have vast potential to store carbon. However, dedicated research is necessary to ensure these resources are developed responsibly. Through collaborative research, Atlantic Canada can become a national and international leader in Carbon Management." *—Tim Bachiu, Director of Research Net Zero Atlantic*

NATURE BASED SOLUTIONS

Forests, soils, wetlands, mudflats, and other terrestrial ecosystems play an important role in removing carbon from the atmosphere. Assessing the dynamics and time scales of carbon cycling and storage is essential to quantifying and enhancing the capacity of these systems to store carbon. Net Zero Atlantic is leading research into carbon soil storage, forest carbon management, and sensitive ecosystems that will deepen the understanding of how natural systems will be a mechanism of carbon management.

GEOLOGIC CARBON STORAGE

The deep saline aquifers in the offshore of Atlantic Canada have the potential to store decades of carbon emissions from Eastern Canada. Before this resource is developed for permanent carbon storage, it is critical to evaluate what may happen to the carbon if it is injected to ensure it is safely and permanently sequestered. Net Zero Atlantic is leading a team of technical experts in the evaluation of the capacity and storage potential of the offshore of Nova Scotia.

CARBON DIOXIDE REMOVALS

Extraction of carbon dioxide directly from the atmosphere presents an opportunity to mitigate emissions and ultimately address historic carbon emissions. Costs of technology, potential effects of carbon removal using aquatic environments, and permanence of storage are data gaps in implementation at scales that are impactful. Net Zero Atlantic is convening groups to articulate the knowledge gaps and providing funding to researchers to address these gaps.

Funding by Natural Resources Canada, Nova Scotia Department of Energy, Nova Scotia Department of Environment and Climate Change, Government of New Brunswick Climate Change Secretariat, Opportunities New Brunswick, and New Brunswick Innovation Foundation.

Enabling conditions for action in

Fuels

Many hard-to-electrify sectors cannot rely solely on renewable electricity to decarbonize. Exploring alternative pathways, such as clean fuels, is essential to achieving net-zero targets. Heavy-duty transport and manufacturing are examples of industries looking at green hydrogen and renewable natural gas as alternative pathways to reducing emissions.

FUELS

Net Zero Atlantic is contributing by identifying the fuels that are most cost effective and highest impact on GHG reduction.

4 REPORTS
5 PROJECTS

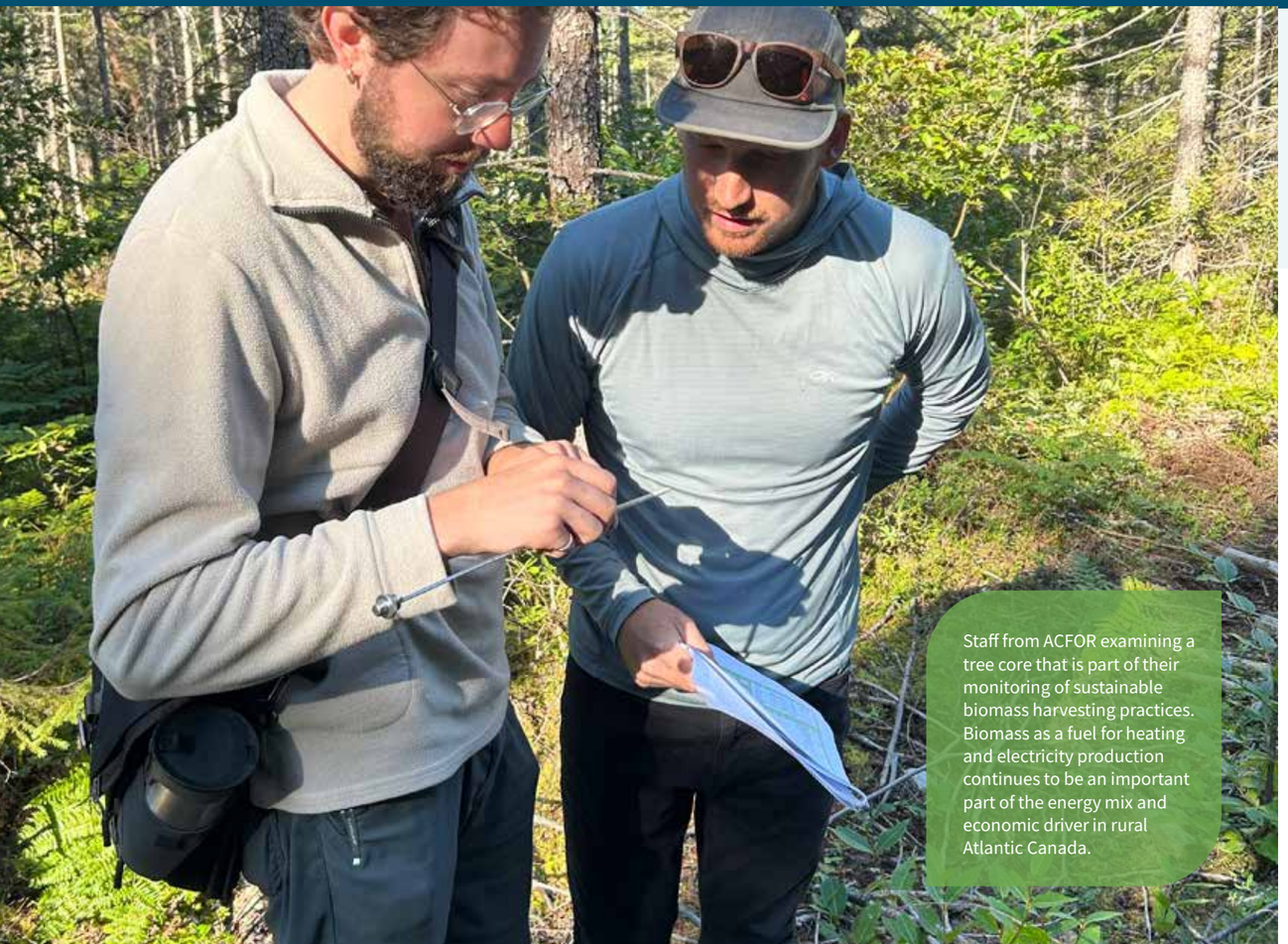
74 CONTRIBUTORS

2 PRESENTATIONS

498 REGISTRANTS
3 EVENTS

14,935 IMPRESSIONS
9 LINKEDIN POSTS

$542K FUNDING FOR 24/25FY



Staff from ACFOR examining a tree core that is part of their monitoring of sustainable biomass harvesting practices. Biomass as a fuel for heating and electricity production continues to be an important part of the energy mix and economic driver in rural Atlantic Canada.

"A variety of fuels are needed to enable the transition to net zero but selecting the best fuel for each use case is complex. Collaborative research among industry, government, and academia is providing insights to best use applications, fuel production, and costs reductions. This approach to research is essential to providing clarity to the complexity." *—Tim Bachiu, Director of Research, Net Zero Atlantic*

NOVA SCOTIA SUBSURFACE ENERGY STORAGE

Temporary storage of bulk clean fuels and other energy carriers is an important part of integrating them into the energy mix. In this project collaboration with RESPEC, we have identified the areas of onshore Nova Scotia with suitable subsurface conditions for storage. By understanding the storage suitability of the locations and how those areas relate to energy production and users, we are providing clarity on how Nova Scotia resources can be developed and stored efficiently.

RNG FEEDSTOCK IN NOVA SCOTIA

We are leading the mapping and evaluating potential renewable natural gas feedstocks across Nova Scotia with technical work being led by TorchLight Bioresources. The aim is to identify pathways for potential sustainable production and use, including a better understanding of both the technical and economic feasibility of developing these feedstocks. Municipalities, agricultural and forestry sectors, and other stakeholders are expected to benefit from our findings.

H_2 SUPPLY CHAIN COLLABORATION

In partnership with the Atlantic Hydrogen Alliance and Energy NL, we are analyzing the requirements for a hydrogen supply chain and the opportunities this could bring to the region. We are helping to ensure Atlantic Canada is ready to capture economic benefits from clean fuels production and use.

Funding by Natural Resources Canada, Nova Scotia Department of Energy, Michelin North America Inc., Port Hawkesbury Paper, and The Shaw Group.

Investing in Students and Emerging Research

Knowing our future relies on attracting bright minds to finding and implementing solutions, we engage students and emerging professionals in relevant ways. We employ post-secondary students throughout the year, award research posters at events, and organize mentoring opportunities. Our team members speak at educational institutions on their experience in the workforce.

University students Laura Leighton and Zoe Mojtyk assisted Net Zero Atlantic staff with many projects and events. Here they are with event coordinator Madison Brennan at the 2025 Atlantic Canadian Conference on Energy System Modelling.

A Look Ahead

At Net Zero Atlantic, our strategy is based on curiosity and insight. What matters to our stakeholders? How can we enable conditions for action? In the year ahead, we are further defining our contributions, starting with a three-year strategic plan. We are looking forward.

net-zero atlantic

Visit us at netzeroatlantic.ca