

SCOTIABANK CLIMATE ACTION RESEARCH FUND (CARF) 2025


Scotiabank's \$10 million Climate Action Research Fund provides annual grants to registered charities and non-profit organizations conducting research and exploring climate-related initiatives. Scotiabank congratulates the following organizations from Canada, USA, Trinidad and Tobago and Peru who will collectively receive research grants totalling approximately CAD \$1 million for their research.

 <p>UWI ST. AUGUSTINE CAMPUS</p>	1	<p>THE UNIVERSITY OF THE WEST INDIES, ST. AUGUSTINE CAMPUS: Trinidad and Tobago</p> <p>The H2-TTransform project is a collaboration between the University of the West Indies and its partners Niterra Co Ltd and Kenesjay Green. Trinidad relies on economically important methanol and ammonia production, based on natural gas, but with very high carbon emissions. This project is piloting a potential decarbonization pathway for these hard-to-abate industries, using waste heat for high temperature Solid-Oxide Electrolysis to produce green hydrogen as an alternative feedstock, 30% more efficiently than alkaline electrolysis.</p>
 <p>propulsion Québec</p>	2	<p>PROPULSION QUÉBEC: Canada</p> <p>Propulsion Québec's feasibility study of Canada's first electric truck corridor between Quebec City and Toronto addresses critical knowledge gaps in heavy vehicle electrification for northern climates. Using real-world carrier data, the study will evaluate electrification scenarios, estimate energy needs, identify optimal charging station locations, and assess total cost of ownership. It will also factor in climate conditions, grid capacity, and regulatory barriers to inform future investments and support the scalable rollout of electric freight corridors across Canada.</p>
 <p>McMaster University</p>	3	<p>MCMASTER UNIVERSITY: Canada</p> <p>The Thermal Network and Heat Recovery System: McMaster University's Scalable Model for Low-Carbon Urban Energy project is advancing a replicable, finance-ready framework for deploying localized, low-carbon infrastructure for social good. By utilizing community-based, carbon-free heat sources, the project reduces fossil fuel reliance, lowers energy costs, and enhances responsiveness to electrical grid demand. This scalable model will attract investment and drive local economic development, offering a practical and equitable pathway to transition toward low-carbon energy systems.</p>
 <p>UTEC UNIVERSIDAD DE INGENIERÍA Y TECNOLOGÍA</p>	4	<p>UNIVERSITY OF ENGINEERING AND TECHNOLOGY (UTEC): Peru</p> <p>Led by UTEC in Peru, PEAT-FLOW Amazonia will quantify dissolved organic carbon fluxes in tropical peatlands using low-cost sensors, drones, and open-source tools. Focused on the Imiria conservation area and allied wetlands in Ucayali, the project will generate emission factors, carbon maps, and replicable monitoring protocols. In collaboration with local universities and protected areas, it will deliver field data, training, and scalable methodologies to strengthen carbon science and conservation in Amazonian wetlands.</p>

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	5	OCEAN WISE CONSERVATION ASSOCIATION: Canada <p>From Urchin Barrens to Underwater Forests is a community-led kelp restoration project by Ocean Wise in partnership with the Tseshahht First Nation. This project will investigate how urchin harvesting spurs kelp forest recovery and revitalizes a blue carbon ecosystem. By integrating traditional knowledge with cutting-edge monitoring, Ocean Wise aims to enhance best practices for urchin management. The project restores kelp beds, builds Indigenous stewardship capacity, generates carbon stock estimates, and offers a scalable model for nature-based climate solutions.</p>
 THE UNIVERSITY OF BRITISH COLUMBIA	6	THE UNIVERSITY OF BRITISH COLUMBIA: Canada <p>UBC's Faculty of Forestry is catalyzing a low-carbon future by developing sustainable solutions to convert select construction waste into value-added building products. Wood waste constitutes a significant portion of construction waste in Canada, with most of it ending up decomposing and releasing carbon emissions in landfills. By developing high-value materials from wood waste, we can reduce the built environment's carbon footprint, supporting the transition to a more sustainable construction sector, and greener economies and communities.</p>
 SFU SIMON FRASER UNIVERSITY	7	SIMON FRASER UNIVERSITY: Canada <p>The Sustainable Optoelectronics Research Group at Simon Fraser University is developing lightweight, printable solar-cell films designed to integrate into greenhouse coverings, generating clean power while allowing plants to thrive. These translucent films could boost energy output in greenhouses, lowering costs and cutting carbon emissions in controlled environment agriculture. This research aims to make solar-powered greenhouses affordable and scalable, supporting food security and sustainable farming in Canada and worldwide.</p>
 UNIVERSITY OF WATERLOO	8	UNIVERSITY OF WATERLOO: Canada <p>At the Laboratory for Anabolic Bioengineering, novel biocatalysts are built, capable of simultaneously transforming multiple waste streams, including food-and plastic-derived wastes and CO₂, into products such as biodegradable plastics. This project will establish a robust process modelling and technoeconomic assessment framework that will be used to find feasible paths to bring biocatalyst-powered, low-carbon, circular chemical production technologies to industrial scale. Scaling pathways will be used to optimize the lab-scale biocatalyst and process development work.</p>
 University of Massachusetts Amherst	9	UNIVERSITY OF MASSACHUSETTS AMHERST FOUNDATION INC.: USA <p>UMass Amherst is advancing low-carbon wastewater treatment through two complementary innovations developed at the university. One approach enhances solids removal during the primary treatment stage without the use of added chemicals, while the other supports biological processes in secondary treatment without the need for mechanical aeration. Together, these innovations substantially reduce energy consumption and greenhouse gas emissions. The project aims to enable broader adoption of sustainable, energy-efficient solutions for wastewater treatment, supporting climate resilience and environmental</p>

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		sustainability.
	10	QUEEN'S UNIVERSITY: Canada
		The Energy Efficiency Engineering Laboratory (EEE Lab) at Queen's University is advancing hydrogen-based technologies to minimize diesel reliance in remote underground mine ventilation and heating operations. The project will develop experimental, numerical, and risk assessment frameworks to evaluate the safety, efficiency, and environmental impact of hydrogen-based systems compared to conventional diesel systems. The research aims to reduce mining energy costs, enhance safety, and create new market opportunities for hydrogen technologies in remote, off-grid mining operations.