

# Wind Energy Circular Innovation Challenge

## Global Edition 2024

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# CHALLENGE OBJECTIVES

RECYC-QUÉBEC and Cycle Momentum are joining forces up to mobilize Quebec's industrial ecosystem addressing both the challenges and opportunities of efficiently managing materials from the energy transition, all through the lens of a circular economy.

This call for projects therefore aims to:



Identify innovative technological solutions worldwide for the sustainable management of materials from the wind energy sector.



Facilitate the adoption of these innovative solutions by industrial companies based in the Province of Quebec.



## **Emmanuelle Géhin**

President and CEO, RECYC-QUÉBEC

*"We shouldn't wait before implementing circular economy strategies. The time to act is now, to put mechanisms in place to manage the materials of the energy transition when they reach the end of their life cycle. Cycle Momentum's expertise in the cleantech investment sector combined with RECYC-QUÉBEC's expertise in residual materials management is a winning collaboration."*

# MATERIALS IN THE WIND ENERGY SECTOR

The ongoing energy transition—driven by the electrification of transportation, the reduction of fossil fuel consumption, and the expansion of renewable energy in our energy mix—will undoubtedly reduce greenhouse gas (GHG) emissions. However, it will also lead to the generation of new materials that must eventually be managed at the end of their life cycle.

According to the Ministère de l'Énergie et des Ressources naturelles (MERN, 2022), between 1999 and 2021, almost 2,000 wind turbines were installed in Quebec, predominantly in the Gaspésie-Îles-de-la-Madeleine region. With an average lifespan of 20–25 years, the turbines from the early 2000s will soon reach the end of their operational life.

In anticipation of this challenge, RECYC-QUÉBEC published a study in 2022 outlining current and future material deposits needed for Quebec's energy transition. Among the key findings of the study, it is noted that in just 9 years, the amount of materials generated will increase from 2,562 tons in 2021 to over 124,000 tons per year by 2030, nearly a 50-fold increase!

As the number of wind turbines continues to grow, particularly under Hydro-Québec's 2035 plan, which aims to add around 1,500 wind turbines by 2035, the search for innovative and sustainable solutions for managing end-of-life materials is becoming an absolute priority.



## WHAT ARE WE LOOKING FOR?

### TYPES OF SOLUTIONS EXPECTED

This call for projects aims to identify solutions worldwide that facilitate the eco-design, re-use and recycling of the various components of wind farms, namely :

- The tower (steel, concrete and electrical connections)
- Foundations (steel and concrete)
- The nacelle (steel, concrete, and electrical connection)
- Rotor and associated blades (composite materials: fiberglass, carbon, resin)



**Patrick Gagné**

Patrick Gagné, President and CEO, Cycle Momentum

*"At Cycle Momentum, we firmly believe that innovation and collaboration are the keys to meeting the challenges of the energy transition. This partnership with RECYC-QUÉBEC will catalyze innovative solutions that will not only reduce environmental impact, but also create new economic opportunities for Quebec. Together, we can turn challenges into opportunities and build a more sustainable future."*

## WHO CAN APPLY?

### PROFILE OF COMPANIES SOUGHT (LOCAL AND INTERNATIONAL)

- Business in operation for more than two (2) years
- Company with solutions in TRL 5 or higher (technological maturity level), scalable and ready for implementation.
- Company interested in setting up and participating in pilot projects with manufacturers in the province of Quebec, Canada.
- Company with more than three employees
- Languages spoken: French or English

**APPLY NOW**

# PARTICIPATION OF KEY PLAYERS IN THE WIND ENERGY VALUE CHAIN

The innovative companies selected will have the privilege of meeting an ecosystem of key players in the wind energy value chain which will be future potential users of these solutions to ensure optimum management of wind farm materials at the end of their life.

**BORALEX**

**ENERCON**  
ENERGY FOR THE WORLD

**Hydro Québec**

**INNERGEX**

**Vestas**

And more to come...

Cycle Momentum will provide personalized support to ensure that selected companies are well prepared for meetings with participating manufacturers.

## **CUSTOMIZED SPONSORSHIP AND COLLABORATION PROGRAM WITH SELECTED INNOVATIVE SOLUTIONS**

The 3 to 5 innovative solutions selected will take part in a 10-week personalized coaching program between December 2024 and the end of February 2025, which will include the following elements:

- An assessment of the company's ability to present its solution effectively to the value chain stakeholders.
- Preparation workshops based on identified needs.
- A series of structured meetings between selected companies and those stakeholders to explore possible collaboration areas.



# SELECTION PROCESS

## NEXT STEPS

### 1. Pre-selection on the basis of applications

A first selection will be made as soon as we receive the applications. These will be analyzed according to the evaluation criteria, and you will receive confirmation of your pre-selection around November 14.

### 2. Interviews with shortlisted candidates

During the week of November 18, we'll set up an interview to learn more about you, your team and your company, as well as the product or service you offer, the market, the competitive landscape and your interest in the program.

### 3. Presentation to a jury

Shortlisted candidates will be invited to make a presentation and take part in a question-and-answer session during the week of November 25. The jury will be made up of RECYC-QUÉBEC, Cycle Momentum and industry representatives.

### 4. Final decision

We will confirm their selection to the 3-5 shortlisted companies in the first week of December 2024.

[APPLY NOW](#)

## KEY DATES

### SELECTION: FROM OCTOBER 30 TO DECEMBER 10, 2024



**SEPTEMBER 17  
TO OCTOBER 29**

Call for entries



**OCTOBER 30 TO  
DECEMBER 10**

Selection process



**WEEK OF  
NOVEMBER 25**

Jury presentation  
with industrialists



**WEEK OF  
DECEMBER 2**

Final decision

### PROGRAM: WEEK OF DECEMBER 10 TO END OF FEBRUARY 2025



**DECEMBER  
12-20, 2024**

Assessment of  
selected  
companies'  
ability to present  
to industry



**JANUARY  
6 TO 25, 2025**

Organization of  
preparatory  
workshops  
according to  
identified needs



**JANUARY 13 TO  
FEBRUARY 21, 2025**

Series of structured  
meetings between  
selected  
companies and  
manufacturers

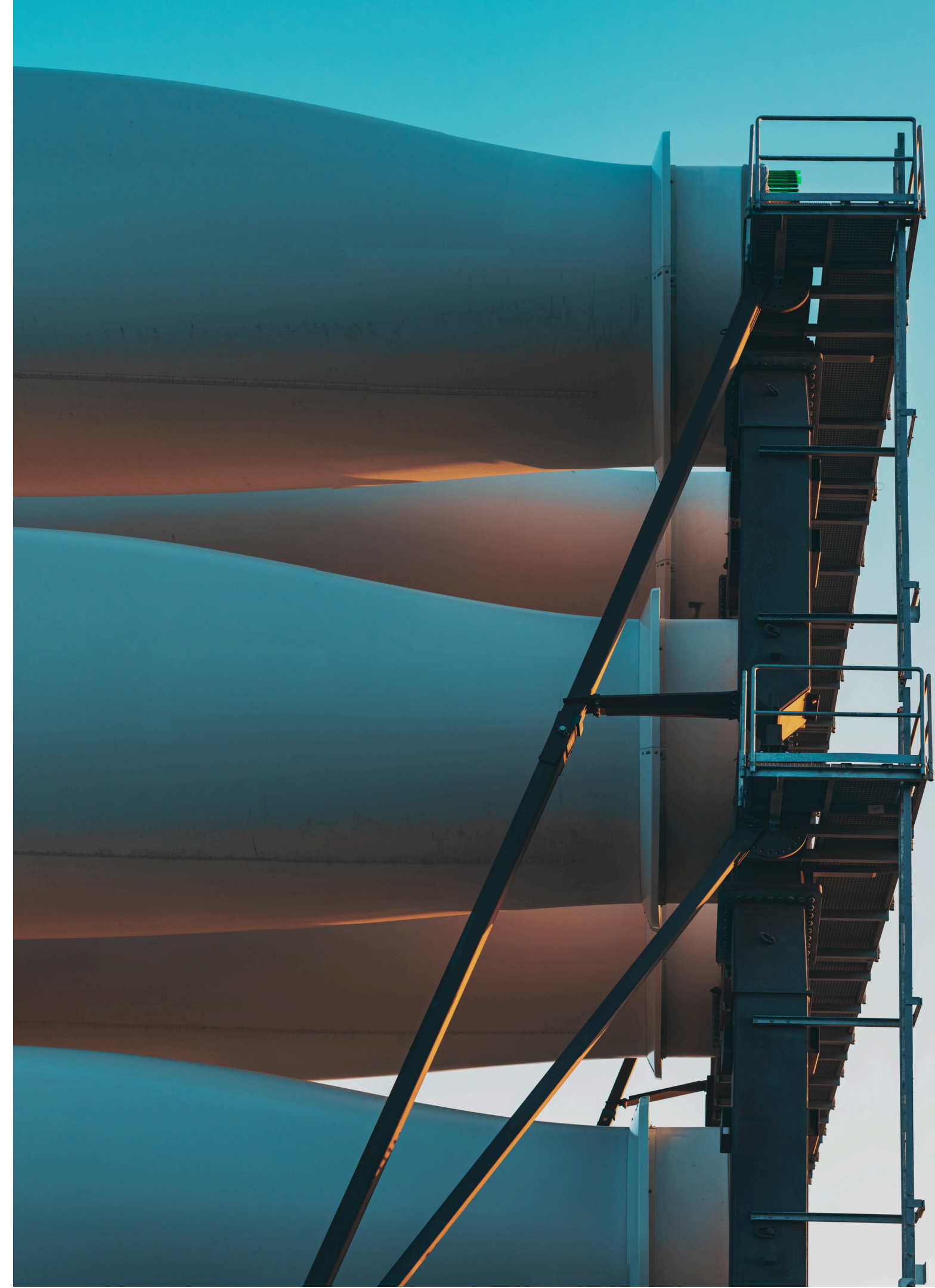


**STARTING IN  
MARCH 2025**

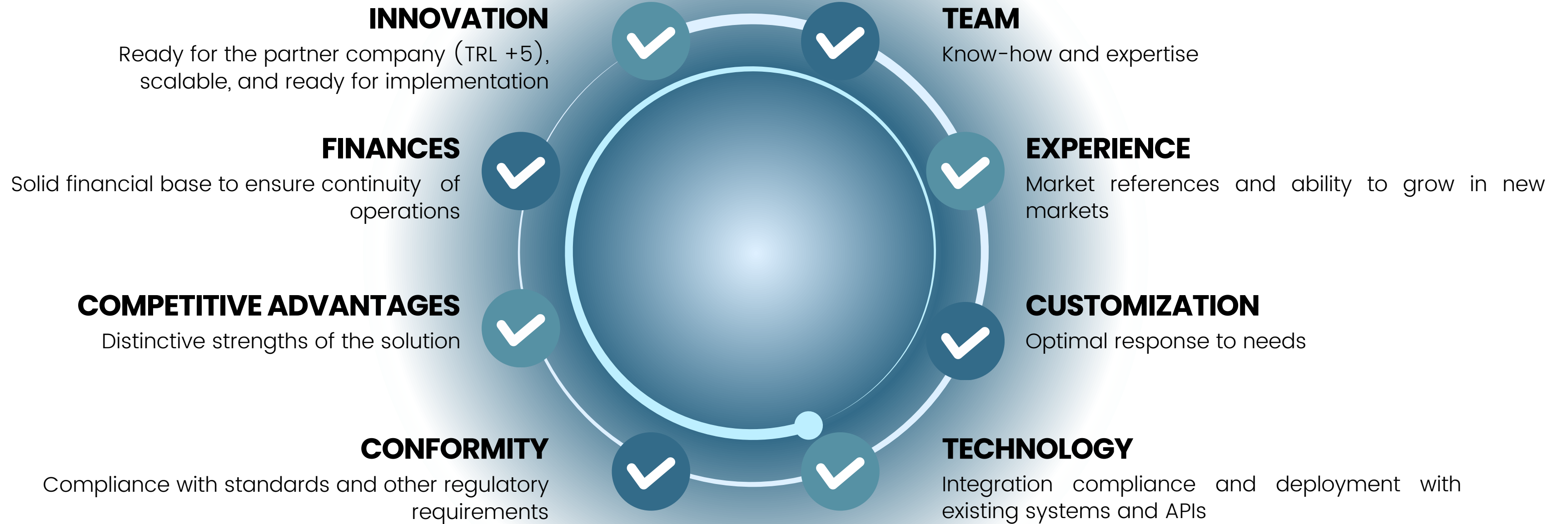
Development of  
partnerships by  
manufacturers

## WHY APPLY FOR THIS CHALLENGE?

- ✦ High visibility and access to a network of key players in wind energy sector.
- ✦ Opportunity to develop a strategic collaboration and/or pilot project with the network of industry players to demonstrate your solution. Examples of sought-after collaborations include: pilot projects, co-development projects, supplier-client agreements, strategic partnerships, investments, and licensing.
- ✦ Direct access to experts from RECYC-QUÉBEC, a Crown corporation in the province of Quebec that promotes innovation in this sector. RECYC-QUÉBEC experts have access to an extensive network of players in the Quebec and Canadian circular economy ecosystem.
- ✦ Cycle Momentum's experts provide guidance on supply chain, financing strategies, marketing, price positioning and communications, to help you prepare for meetings with wind energy sector stakeholders.
- ✦ Raise your company's profile with a communication campaign on social networks.
- ✦ Opportunity to present your company and technology to a panel of renowned experts and entrepreneurs.
- ✦ Cycle Momentum's local partners support international companies wishing to establish themselves in Quebec.



# SELECTION CRITERIA





## ABOUT RECYC-QUÉBEC

RECYC-QUÉBEC is a Crown corporation created in 1990 with the aim of making Quebec a model of innovative, sustainable waste management for a zero-waste society. RECYC-QUÉBEC promotes, develops and encourages the reduction, reuse, recovery and recycling of containers, packaging, materials and products, as well as their reclamation, with a view to the circular economy and the fight against climate change.

## ABOUT CYCLE MOMENTUM

Cycle Momentum is an international acceleration and innovation platform whose mission since 2015 has been to identify and support the development of cutting-edge technologies to address the major ecological challenges facing humanity. A member of the Cycle Capital platform, Cycle Momentum offers acceleration and open innovation programs to support entrepreneurial growth, financing and commercialization of climate technologies. We establish the necessary collaborations between manufacturers and start-ups to accelerate their commercialization. We offer investment opportunities through our Origo program and our extensive network of investors.

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## OUR PARTNERS

### WIND FARM OPERATORS

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At Boralex, we have been providing affordable renewable energy accessible to everyone for over 30 years. As a leader in the Canadian market and France's largest independent producer of onshore wind power, we also have facilities in the United States and development projects in the United Kingdom. Over the past five years, our installed capacity has more than doubled to over 3 GW. We are developing a portfolio of more than 6.8 GW in wind, solar projects and storage projects, guided by our values and our corporate social responsibility (CSR) approach. Through profitable and sustainable growth, Boralex is actively participating in the fight against global warming. Thanks to our fearlessness, our discipline, our expertise and our diversity, we continue to be an industry leader. Boralex's shares are listed on the Toronto Stock Exchange under the ticker symbol BLX.



Innergex is an independent renewable power producer which develops, acquires, owns and operates hydroelectric facilities, wind farms, solar farms and energy storage facilities. As a global corporation, we conduct operations in Canada, the United States, France, and Chile. Together, we are creating a new current.

# OUR PARTNERS

## TURBINE MANUFACTURERS



As a pioneer of wind energy technology and a committed supporter of the energy transition, ENERCON has specialised in developing, producing, selling and servicing onshore wind turbines. Pursuing the mission of 'Energy for the world', ENERCON has been championing sustainable energy generation from onshore wind since 1984. Thanks to the innovative wind turbine technology, high quality standards and many years of experience, ENERCON is one of the industry's leading manufacturers in the world with more than 62 GW installed. ENERCON has been a major player in the Canadian market since 2001, with over 2.7 GW of installed capacity across eight provinces and territories.



Vestas is the energy industry's global partner on sustainable energy solutions. We design, manufacture, install, and service onshore and offshore wind turbines across the globe, and with 182 GW of wind turbines in 88 countries, we have installed more wind power than anyone else. Through our industry-leading smart data capabilities and unparalleled more than 151 GW of wind turbines under service, we use data to interpret, forecast, and exploit wind resources and deliver best-in-class wind power solutions. Together with our customers, Vestas' more than 32,000 employees are bringing the world sustainable energy solutions to power a bright future.