

# CLEAN ENERGY

## CLEAN TECHNOLOGY

RENEWABLE & ALTERNATIVE ENERGY – Clean Power and Heat

## FUNDING DETAILS

### Small Modular Wind Energy Demonstration Project in Rocky Mountain Wind Funnel (Bow Valley / Exshaw Area)

Baymag and Stantec see an opportunity to leverage an untapped, unique high-speed wind resource in the Bow Corridor in Canada's Rocky Mountains using small-scale wind power generation. The first phase of the project is a desktop evaluation of commercial or near-commercial micro-wind turbine solutions which could be suitable under this wind regime. The second phase is a 1-year pilot study of two or more selected technologies. The resulting public report will detail technology recommendations, economics, annual emissions reductions and other learning.



#### RECIPIENT:

**Baymag Inc.**



#### PARTNERS:

**Stantec, Bow Valley  
Green Energy Co-op**



#### TOTAL BUDGET:

**\$340,000**



#### AI FUNDING:

**\$150,000**



#### PROJECT DATES:

**FEB 2025 –  
MAY 2027**



#### PROJECT TRL:

**N/A (Knowledge  
Generation study)**



## APPLICATION

Small wind technologies have potential to leverage a local underutilized renewable energy resource (wind) at the electricity consumer's site. Through knowledge sharing, the study could also help others who wish to leverage wind power in similar/other wind regimes throughout Alberta, where there may be restrictions on utility scale wind projects, such as wind turbine height, visual impacts and protection of wildlife.



# ALBERTA INNOVATES CLEAN ENERGY

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### PROJECT GOALS

The Project goals include the following:

- Identify preferred technologies for this wind regime;
- Evaluate selected technologies' performance through pilot installations.
- Determine economics and greenhouse gas emissions reductions of micro-wind turbines for demand-side generation in similar wind regimes.
- Identify opportunity to decarbonize facilities and increase local renewable energy supply through optimized design and technology selection.
- Share results publicly to motivate action, further studies and/or deployment of micro-wind turbine technologies suited to the Bow Valley/Exshaw region and similar wind regimes.

### BENEFITS TO ALBERTA

- As a supplier of Alberta minerals, enhance Baymag's reputation and commitment to reducing greenhouse gas emissions, in addition to their existing solar array.
- Contribute to reducing/offsetting GHG emissions of high-emitters (Lafarge and Graymont), communities and businesses, locally and in similar wind regimes.
- Contribute to reducing electricity system emissions and meeting Alberta's emission reduction targets.
- Provide opportunity for electricity system owners, operators and regulators to evaluate electricity system impacts of small scale, demand-side wind generation.
- Support commercialization of emerging, small scale wind technologies in Alberta.
- Contribute to economic diversification and new, highly skilled jobs in clean technology.



**1 Publication**



**50+ Future Jobs**



**1 New  
Product/Service**



**10-100 kt/yr Project  
GHGs Reduced**



**100 kt to 1 Mt/yr Future  
GHGs Reduced**

### CURRENT STATUS

#### MAY 2025

In Progress. Technology evaluation is in progress to identify, evaluate and select candidate technologies. Site evaluation is underway to evaluate wind resource in relation to site topography and wind flow models, local legal, geographic or engineering constraints, and optimal installation design.