

# arctic RENEWABLE ENERGY

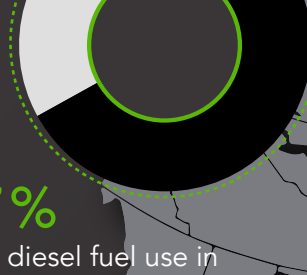
## CHALLENGES & SOLUTIONS



### IN NORTH AMERICA'S ARCTIC DIESEL IS KING

**200 of 280**

Remote villages rely exclusively on Diesel



**67%**  
of all diesel fuel use in Canada occurs in Yukon, Northwest Territories and Nunavut.

**79**  
towns in Canadian Arctic

#### ALASKA

Scarce transportation infrastructure and long distances between communities mean that Alaskans pay nearly double the national average for energy



#### CANADA

Electricity costs have reached peaks of over 10 times the average Canadian price on a per kilowatt-hour



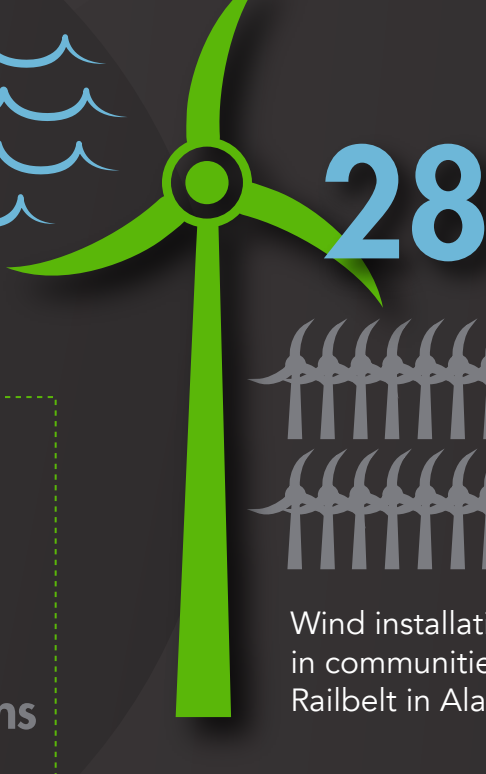
### WIND IS ONE ENERGY SOLUTION



**KODIAK, ALASKA**  
Energy 100% from wind and hydropower

**Saving \$22 million**  
since 2009

**Reducing carbon emissions**  
**62 million** pounds a year



Wind installations operating in communities outside of the Railbelt in Alaska

MORE CAN BE DONE

**TO HELP WIND GROW**



### BEST PRACTICES OF WIND IN THE ARCTIC

#### PLANNING & POLICY



- Plan development & implementation of project based on well-funded technical, economic, and social feasibility study.
- Don't duplicate work that has already been done – share success stories from other communities.
- Tie Northern wind energy development with national greenhouse gas emission targets.
- Be clear on local benefits, challenges, and further opportunities at the start of planning.

#### COMMUNITY ENGAGEMENT

- Get the entire community on board, even if it means going door to door for tea time.
- Every community is different. Take the time to get to know the local context.
- Community engagement must be a two-way dialogue, not a sales pitch.
- Having a community champion, someone who loves the wind project, is vital to success.



#### FINANCING & TECHNOLOGY



- Co-benefits of sharing energy systems with industrial sites like mines can lower risk and costs.
- 100% community ownership can help with 100% community buy-in.
- Creating school-based technical assistance programming can engage youth and build inclusive maintenance skills simultaneously.
- Look for low cost, innovative solutions to tech issues. Thermal electric heaters like super-heat ceramic bricks that slowly release heat into homes can provide a battery storage alternative.



### BOTTOM LINE: WHAT'S NEEDED?



**1 FUNDING** for construction and built infrastructure is just as important as research funding – and everyone needs more of it.



**2 MORE ACCESS** to capital through public grants, public private partnerships, & green banks.



**3 SHARE DATA** online from other projects, to both open source failures and provide more models that work and can be brought to scale.

“ ONE SUCCESSFUL WIND PROJECT IN ONE COMMUNITY IS A SUCCESS FOR ALL ARCTIC COMMUNITIES ”



THE ARCTIC INSTITUTE

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