

arctic RENEWABLE ENERGY

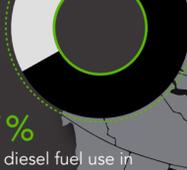
CHALLENGES & SOLUTIONS



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

100%

KODIAK, ALASKA

Energy 100% from wind and hydropower

Saving \$22 million
since 2009

Reducing carbon emissions
62 million pounds a year

28

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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