



Media Release

January 16, 2023

Biomass District Heating System in Downtown Yellowknife can Reduce Emissions, Save Customers Money on Heating, and turn a Profit.

Alternatives North is pleased to announce very positive findings from a newly completed study on a biomass district heating system for downtown Yellowknife.

The results demonstrate that this project has the potential to reduce annual net Green House Gas (GHG) emissions by at least 13,000 t CO₂e. In addition, it carries a strong business case, with a rate of return of 8.2% if developed by a for-profit, and 20.4% if developed by a non-profit, in the base case.

This study can now act as the first step in a potential developer's business plan, proof that the concept is profitable if the system is constructed and operated as either a for-profit or non-profit organization.

"For-profit and not-for profit ownership models were analyzed under a variety of scenarios including differing carbon tax, climate warming, capital costs, grant funding, and fuel rates. We were happy to see that nearly all scenarios were profitable over a 30-year time period while including a 10% reduction on energy cost to ensure that connected customers would save on annual heating bills. This project reduces emissions, saves customers on heating, and turns a profit. It checks all the boxes we thought it would, and we hope that it's enough to make developers take interest and get this project built" stated Lachlan MacLean, Alternatives North member and project manager.

This report confirms Alternatives North's [previous findings](#) that biomass district heating can deliver meaningful, cost negative, GHG reductions fast enough to help the NWT meet its emission reduction goals for 2030. It also demonstrates a new business opportunity as an energy provider.

Alternatives North partnered with the City of Yellowknife and Arctic Energy Alliance, and engaged multiple key customers in the target area. The study represents the most detailed analysis to date on heating energy use in downtown Yellowknife.

FVB, an engineering and management consulting company specializing in District Energy conducted the feasibility analysis. FVB has extensive experience with all stages of district energy system development within Canada, including Yellowknife, and around the world. FVB previously analyzed the potential for geothermal district heating conducted by the City of Yellowknife in 2011.

Funding was generously provided through a grant from the Government of Canada's Northern Responsible Energy Approach for Community Heat and Electricity (Northern REACHE) program.

Alternatives North is a Territorial social and environmental justice coalition based in Yellowknife. We have participated in climate change planning and actions over the past decade, publishing reports on "[100% Renewable by 2050](#)" (2016) and "[Climate Emergency: Getting the NWT off Diesel](#)" (2020).



Alternatives North

Target area of the study



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Available for in-person interviews January 19th and 20th.