

# The BNA District Heating Biomass Project and the Papasay Sawmill



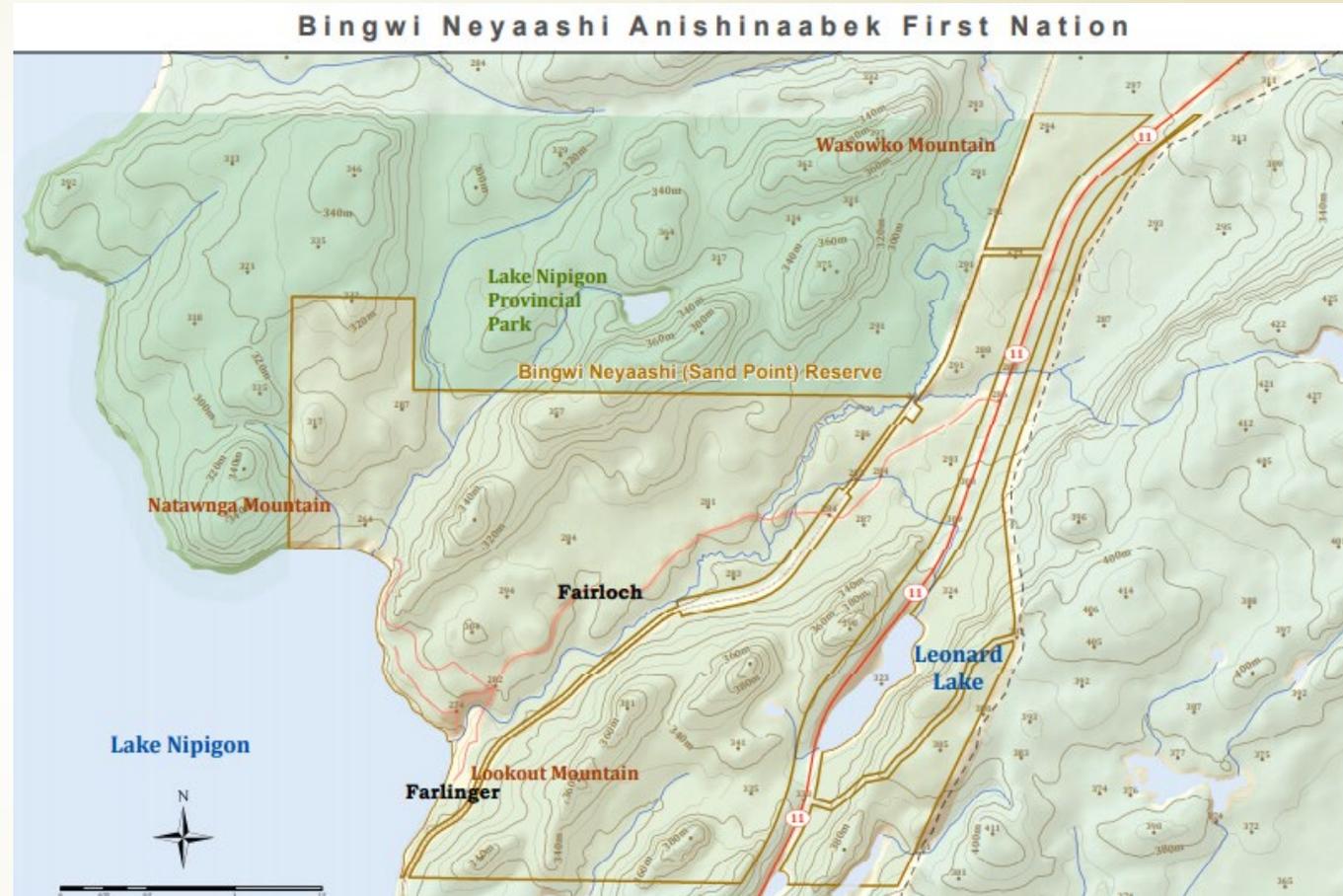
# Table of Contents

- ▶ About Bingwi Neyaashi Anishinaabek (BNA) First Nation and Papasay Value Added Wood Products (PVAWP)
- ▶ Biomass Project at the Sawmill
- ▶ BNA District Biomass Heating Project
- ▶ Conclusion



# About Bingwi Neyaashi Anishinaabek First Nation Papayas Sawmill

- ▶ BNA lands are located along the eastern shores of Lake Nipigon, approx. 17km south of the community Beardmore, and approx. 50km north of the community of Nipigon and the junctions of Highways 11 and 17.
- ▶ BNA has a registered population of 380 band members.
- ▶ The Sawmill is located in BNA's Lot A Industrial Park. This is the location of the Biomass Boiler Heating System.
- ▶ The Sawmill provides employment opportunities for BNA members and workers from around the region and also provides specific training skills.
- ▶ Encourages business partnerships
- ▶ Utilizes the natural resources within the region
- ▶ Generates revenue for the development of the community



# Introduction

- ▶ The first BNA Biomass Project began when BNA received funding from the Clean Energy for Rural and Remote Communities (CERRC) program through Natural Resources Canada (NRCAN)
- ▶ The Biomass project located at the Papasay sawmill utilizes residual fiber for heating needs at the Sawmill.
- BNA worked with NRCAN to include additional important activities for this Biomass Project.
- This included building in heating systems for the new BNA homes that will eventually tie-in to a community district heating system, fueled by wood chips.
- BNA also acquired an additional mobile chipper to move into the commercial biomass space.





# The District Biomass Heating Project

- ▶ BNA has received funding from NRCan to complete a District Heating Business Case.
- ▶ The development of a biomass district heating system represents a strategic addition to PVAWP's current operations by transferring PVAWP's existing disposal costs onto its new 'customers'. By supplying the BNA District Heating project with its residual wood generated primarily through lumber manufacturing, the PVAWP facility can ensure a fair and stable price for BNA members and receive value for its residual wood.





# BNA District Heating Business Case

- ▶ The objective of this BNA District Heating Business Case Development document is to assess the opportunities for BNA to develop and implement a sustainable business model for a biomass district heating network, and to support the community's goal of energy (and subsequent, heat) sovereignty by using equipment and processes which maximize available resources and respect the community's values of pursuing a net-zero carbon energy supply in the community.
- ▶ This business model is based on upgrading residual wood generated by the community-owned Sawmill into high-quality and competitively-priced wood chips and using those chips to provide heat energy to community buildings and residences through a small-scale biomass district heating system that costs less than current spending on household energy while keeping the savings and expenditures in the community – all instead of using outsourced and imported products to provide heat energy.



## BNA District Heating Business Case

- ▶ This report has evaluated seven separate cases for an initial investment in a biomass district heating system. This evaluation was based on energy efficiency (heat requirements, piping distances for various buildings) as well as a financial analysis that evaluated the feasibility of each case for both the capital and operating expenditures.
- ▶ Key parameters that were considered when modelling included pricing of the biomass supply from PVAWP, ensuring a fair and affordable pricing model for residents, and creating a long-term sustainable system that considers the future replacement costs. The preferred configuration included servicing Phase 1, 1.5 and 4 housing developments, the Elders complex, band office and community/public buildings.



## This Sustainable Business Case Development will address the following topics:



Detailed Business Case Description and Objectives

Ownership of Utility and Operational Model

Boiler Size and Placement

Updated wood supply availability and costs, including logistics and other operational costs

Financial analysis (12-Year Projections)

Sustainable expansion strategy/business case.

# Conclusion

- ▶ BNA would like to thank Natural Resources Canada for their continued support. BNA will continue to strive to use renewable resources in the development of its brand-new community. Miigwetch!

