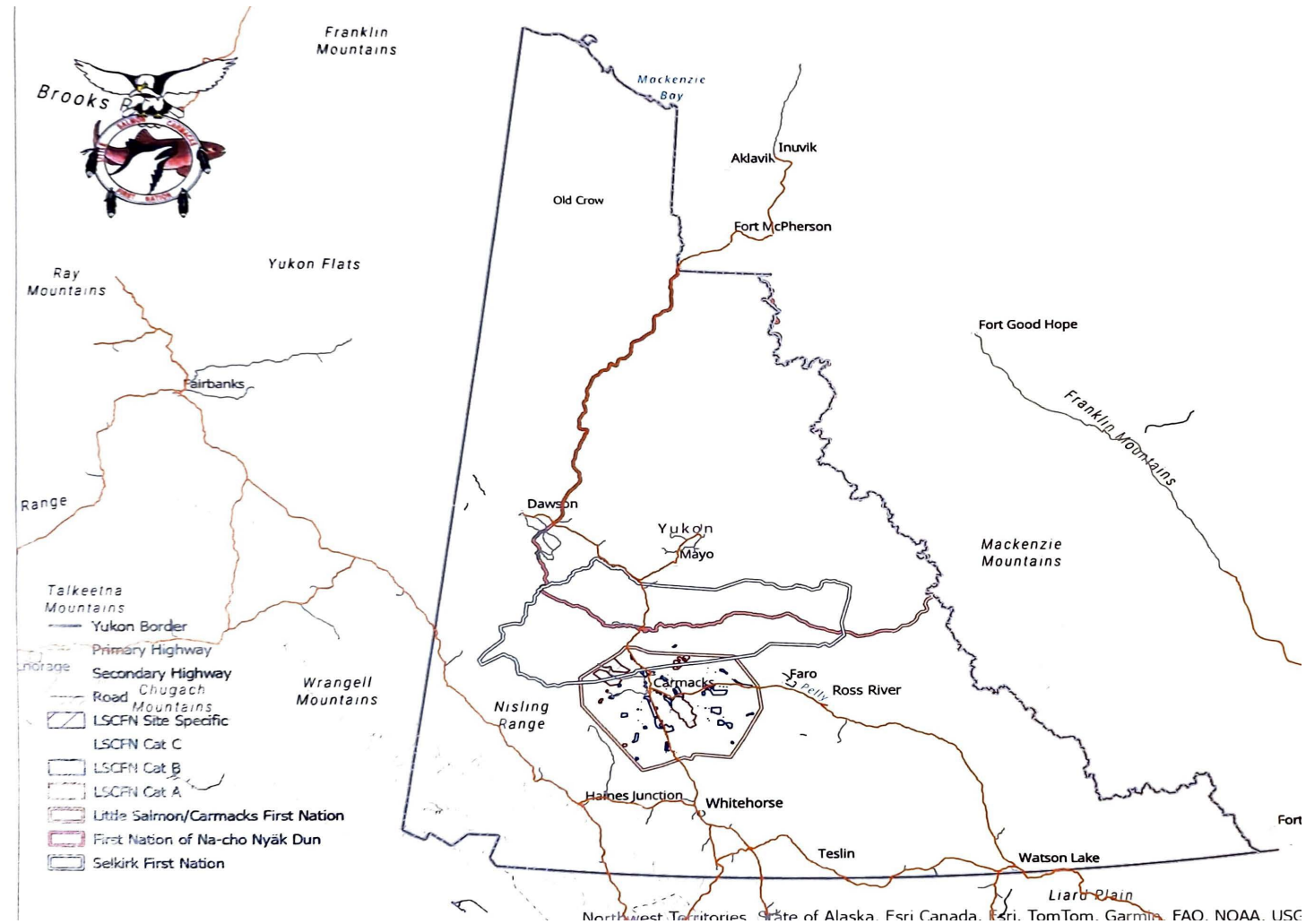

NATIONAL SUMMIT ON THE INDIGENOUS FOREST BIOECONOMY 2024
CREATING NEW & INNOVATIVE OPPORTUNITIES THROUGH COMMUNITY FORESTRY

THUNDER BAY, ONTARIO OCTOBER 7 – 10, 2024



LITTLE SALMON CARMACKS FIRST NATION



HISTORY OF CARMACKS



PAST & PRESENT FORESTRY ACTIVATES



FOREST FIRES



FOREST PRODUCTS & MARKETS



NON TIMBER FOREST PRODUCTS



VALUE ADDED MARKETS- STUMP TO MARKET APPROACH





OUR DISTRICT HEATING PROJECT

The Carmacks Development Corporation (CDC) is the business arm of the Little Salmon Carmacks First Nation, a Yukon Self-Governing First Nation. The CDC District Heating Project is an Indigenous developed, owned, and operated biomass district heating opportunity that represents a bold step toward energy independence, sustainability, and community-driven growth.

This project is set to transform the local energy landscape by providing affordable, renewable heat to ten core commercial and community buildings while positioning for the integration of multiple future energy sources. Through a future-proofed phased approach and strategic partnerships, the project will serve as a model of innovation, environmental stewardship, and integrated community, social and economic development, all rooted in Indigenous knowledge, community, and leadership.

MULTIPARTNER APPROACH: A FOUNDATION FOR SUCCESS

Collaboration is central to the project's success. Built on a foundation of strategic partnerships that bring together technical expertise, financial backing, and community involvement for true capacity building.

Key partners such as the Carmacks Development Corporation (CDC), Natural Resources Canada (NRCan), Environmental Resources Management Consultants Canada Ltd. (ERM), and Little Salmon First Nation, Yukon Forest Management, Yukon Economic Development, Village of Carmacks and the Carmacks Renewable Resources Council, and other stakeholders will provide essential funding and resources to enable the project's short-term development and long-term operational viability.

Incorporating both private sector expertise, public sector support, and First Nation's community, ingenuity and creativity, the project will exemplify a new era of collaboration between Indigenous communities and external organizations. This multi-partner approach not only ensures access to a wide range of expertise is available to the project, but also encourages inclusive growth and capacity building where the community retains control and decision-making power. These partnerships will also help pass on lessons learned to future projects, and attract further investment into the next phases, including future energy projects, including hydro, wind, renewables and geothermal.





MULTIPHASE APPROACH: BUILDING FOR THE FUTURE

The project will be designed and implemented in a multiphase approach, ensuring that each stage is developed with sustainability, community needs, and long-term scalability in mind. The initial phase will focus on providing district heating to ten commercial and community buildings including the school, recreation centre, Carmacks Hotel complex (6 businesses), health campus, council building, administration building, using locally-sourced chips from trees cut to create firebreaks and other biomass supplies. High-efficiency biomass boilers will convert this organic material into heat, providing a reliable and environmentally friendly alternative to diesel-based heating.

As the project evolves, additional phases can be launched, potentially expanding to other buildings, as well as energy sources like geothermal power, biodiesel, on-site or regional renewables (via power purchase agreements), and expanded grid connections to build a robust, resilient, reliable and optimized sustainable district heating system.

Moreover, the project lays the groundwork for future expansion into other energy areas, such as the planned 10 MW hydroelectric project, which could serve the energy needs of both the community and surrounding regions. A similar hydro project in Whitehorse offers a proven model for success, demonstrating how Indigenous-led energy sovereignty can foster economic resiliency and sustainability.

THE RIGHT ENERGY FOR THE RIGHT USE: AN OPTIMIZED SOLUTION



The heart of this initiative, is the principle of applying the “right energy for the right use”. By diversifying regional energy sources – biomass, grid electricity, battery and energy storage solutions, diesel/biodiesel backup, geothermal, and even hydrogen – this project and its future neighbors will enable the most efficient, resilient, and sustainable resource is used for each specific application. By leveraging these diversified energy sources, projects such as biomass energy systems only help to alleviate the burden of energy demands on an already overused grid system.

Biomass will serve as the primary heating source for this initial district, which not only reduces fuel costs and dependency on fossil fuels but also turns organic biproducts into valuable energy, minimizing environmental impact. The project also sets the stage for future developments that go beyond energy production. For instance, the ash product from the biomass boilers can be repurposed to enhance soil fertility in community greenhouses, support food security initiatives.

In short, by connecting these various forms of energy and implementing an optimization software solution for the dispatch of each energy source, the project will maximize efficiency and reduce overall emissions, creating a robust and flexible energy network for the community. This multi-use approach reinforces the long-term goal of creating a self-sustaining ecosystem that benefits both the environment and the community.

BUILDING CAPACITY FOR THE FUTURE

The project's long-term success depends on strong local management and capacity building. Through a 15-year management contract, Indigenous corporate and community leaders will gain the skills and experienced needed to design, operate, and maintain the district heating system. This hands-on management experience will empower local leaders and youth, ensuring they have the knowledge and capacity to expand and diversify energy projects in the future.

This model not only builds capacity within the community, but also sets the stage for further initiatives that support energy sovereignty. The skills developed here can be transitioned and applied to future projects and business endeavors, such as further renewable energy projects, investments, food security initiatives, innovation hubs, educational institutions, and development of non-profits and cooperatives, enriching the entire community and region.



CDC DISTRICT HEATING PROJECT

IN AN ERA MARKED BY CLIMATE CHANGE, ADAPTATION, AND A NEED FOR RESILIENCY AND RELIABILITY SET AMONGST RISING ENERGY COSTS, INDIGENOUS COMMUNITIES ARE DEMONSTRATING LEADERSHIP IN SUSTAINABLE ENERGY DEVELOPMENT. THE NEW CDC BIOMASS DISTRICT HEATING PROJECT, DEVELOPED, OWNED, AND OPERATED BY THE COMMUNITY IS AN INNOVATIVE INITIATIVE DESIGNED TO HARNESS RENEWABLE ENERGY, REDUCE ENVIRONMENTAL IMPACT, AND CREATE ECONOMIC OPPORTUNITIES.

THIS PROJECT WILL PROVIDE CLEAN, RELIABLE HEATING FOR COMMUNITY CORE FACILITIES USING LOCALLY SOURCED BIOMASS AND OTHER RENEWABLE ENERGY TECHNOLOGIES TODAY AND INTO THE FUTURE

MAHSI CHO!

