



FIRST NATIONS HOME ENERGYSAVE

# Community Success Story

## Investing in Passive Housing at Yale First Nations

### Community Context

Yale First Nation is located around 20 km north of Hope, where its main reserve adjoins the unincorporated settlement of Yale. The Nation is composed of 16 existing reserves totalling approximately 217 hectares. Yale First Nation has 160 band members living on and off reserve.

When Housing Manager, Crystal Sedore, started at Yale First Nation, there were no housing policies, no rents collected, no ongoing home maintenance, and no housing department. Homes on reserve faced major issues including plumbing failures, leaking roofs, broken windows and doors, inadequate ventilation, and water damage. Individual housing units, built in the conventional “BC Box” style, were costing more than \$60,000 per year to maintain and repair.

Crystal applied for and received funding to create a housing policy, establish a housing committee, and hire a housing intern. She also initiated the major projects of a housing needs assessment, maintenance plan, and plan for new construction. Yale First Nation began to explore more sustainable approaches to housing.

### Project Description

In the pursuit of sustainable housing approaches, Yale First Nation learned about Passive Housing and its energy efficient design. Like many First Nations households in BC, homes in Yale First Nation struggle with high heating bills that can come to over \$200 a month. With funding from CMHC and an additional \$300,000 contributed from the Band, Yale



Photo Credit: Yale First Nation

### Collaborators

Yale First Nation  
Britco LP  
Canada Mortgage and Housing Corporation (CMHC)

### Project Leads

**Crystal Sedore**  
Housing Manager,  
Yale First Nation

**Colin Doyle**  
Director of Indigenous Relations  
Britco LP



Photo Credit: Yale First Nation



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## Milestones

### Fall 2015

Yale First Nation meets with Britco.

### May 2016

Application to Section 95 funding through CMHC.

### June 2016

Yale receives conditional approval for their funding application.

### July to August 2016

Demolition and removal of existing condemned homes.

### September to October 2016

Passive House modules are constructed in Britco's facility.

### January 2017

Modules are set on the foundation.

### March 2017

Work on building finishings, both interior and exterior.

### April 2017

Tenants move in to the new housing units.



decided to invest in building new rental housing. They turned to Britco, a modular building company, to construct 6 family units in a building that meets the highly energy efficient Passive House standards.

The rigorous Passive House design standards involves increased insulation, airtightness to minimize heat loss, no thermal bridges, triple pane windows, heat recovery ventilation, and solar orientation to maximize passive heating. As a result, Passive Homes are 80% more energy efficient and emit 80% less greenhouse gases.

The modular homes were prefabricated in Britco's facility, which reduced the cost of local labour and ensured that Passive Housing standards were met. When the modules were transported to Yale First Nation, the buildings were set on the foundation within 2 days. The entire construction process took 5 months. In terms of expenses, the units cost \$200-233 per square foot as well as \$2000 per module for transportation. Crystal Sedore noted that the units were built for around \$50,000 more than the typical "BC Box houses", but emphasizes that the Nation will expect savings in heating and maintenance over the years.

After the construction project wrapped up, CMHC stepped forward with funding to perform an 18 month energy monitoring project. This project will provide data on the energy efficiency of the Passive House modules and will offer a cost comparison to a similarly sized conventional home.

### Lessons Learned

Communities need housing that is low maintenance. Spending around \$60,000 per year to repair a single household is not sustainable.

Housing needs to be appropriate for local climates. Yale First Nation has a rainforest climate and one of their homes with a stucco exterior became rotted out 12 inches from the ground.

Build homes that allows for tenants' traditional cultural practices. Consider that cooking and other cultural practices creates high levels of dampness and will require mould-resistant building material.

Create a long term relationship with your builders to ensure existing warranties as well as their support for system maintenance.

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