# GITXSAN ENERGY INC. HAZELTON BIOHEATING PROJECTS

**RICK CONNORS** 

MARCH 11, 2021



#### **SEVERAL INSTALLATION SITES**

- 1. Upper Skeena Recreation Center
- 2. Gitxsan Wet'suwet'en Education Society College
- 3. Gitanmaax Gas Bar & Car Wash
- 4. Gitxsan Development Corporation New Office
- 5. Gitxsan Forests Inc. 3 Bay Commercial Garage Building
- ✓ Supported by NRCAN CERRC funding
- ✓ Supported by Community
- ✓ Part of the Community Plan for the area
- ✓ Evergreen BioHeat Ltd. Supplier/Installer



#### **UPPER SKEENA RECREATION CENTER**

- Arena, Gymnasium, Meeting Rooms, Confectionary
- Significant delays (2 years)
- Multiple stakeholders
- 320 tonnes GHG reduction projection
- 2 T4-150 kW boilers
- Wood chips & pellets
- Start-up May 2021





#### **UPPER SKEENA RECREATION CENTER**







## GITXSAN WET'SUWET'EN EDUCATION SOCIETY - COLLEGE

- Retrofit build of old building
- Installation concerns asbestos, room size
- Single stakeholder
- Skilled labour available
- 300 tonnes GHG reduction
- 2 T4-150 kW boilers
- Wood chips & pellets
- Start-up 2020





## GITXSAN WET'SUWET'EN EDUCATION SOCIETY - COLLEGE







#### GITANMAAX GAS BAR & CAR WASH

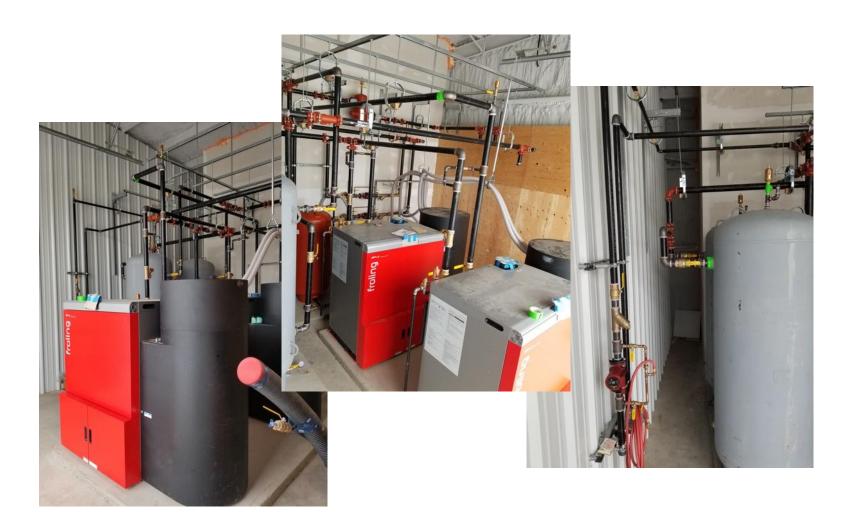
- Prefabricated new build
- Significant delays
- Single stakeholder
- Skilled labour available
- 150 tonnes GHG reduction
- 2 P4-100 kW boilers
- Pellets
- Start-up 2020







#### GITANMAAX GAS BAR & CAR WASH





#### GITXSAN DEVELOPMENT CORP - OFFICE

- New build
- Significant delays
- Long delivery items
- Single stakeholder
- Skilled labour available
- 110 tonnes GHG reduction
- 1 T4-150 kW boiler
- Wood chips & pellets







### GITXSAN DEVELOPMENT CORP - OFFICE







#### **GITXSAN FORESTS INC. - GARAGE**

- Retrofit of old garage building
- Domestic hot water included
- 35 tonnes GHG reduction
- 1 P4-32 kW boiler
- Pellets
- Hot air blowers
- Start-up 2018





#### **KEY POINTS / LESSONS LEARNED**

- ✓ Avoid winter civil work
- ✓ Do not over engineer the project
- ✓ Training is key
- ✓ Timely ordering of long lead time equipment
- ✓ Attention to mechanical room layout serviceability long-term
- ✓ Ensure all equipment certifiable to Canadian standards (CSA, ASME)
- ✓ Engage community early newsletter highlighting benefits
- ✓ Identify a "Community Champion" ownership of the project
- ✓ Train more than one individual



#### **KEY POINTS / LESSONS LEARNED**

- ✓ Hire local labour, machine operators and contractors but, make sure experience is part of your equation
- ✓ Reputable engineering partner don't over engineer, keep it simple
- ✓ On reserve deliveries save PST plan your deliveries
- ✓ Know where you live and assess limitations (deliveries, services, accommodations, availability of last minute acquisitions, etc.)
- ✓ Study your fuel supply logistics
- ✓ Understand limitations of fuel supply quality and its effect on the operability of your site
- √ Train the people



### Thank You!