

Kwadacha First Nation taking charge of their own power generation



Located in Fort Ware, the Kwadacha Nation is an off-the-grid remote community in northern British Columbia, more than 570 km north of Prince George. Home of the Tsek'ene people, the community has an estimated population of 380, and approximately 80 homes. Due to its remote location, the community has traditionally relied on costly diesel generators to provide electricity, and propane for heat.

This beautiful and remote community is now the home of the first EnergyBlock, comprising 3 containerized and modular units with integrated wood chip drying and handling built and insulated to survive the harsh environment.

Each individual Combined Heat & Power unit, provides $45 \text{ kW}_{\text{el}}$ and $108 \text{ kW}_{\text{th}}$ for a total of $135 \text{ kW}_{\text{el}}$ and $324 \text{ kW}_{\text{th}}$, providing electricity for the community as well as a clean and sustainable source of heat for the local high school and greenhouse facility.



The system uses dead wood (beetle-killed pine) from the surrounding area, which amongst other benefits helps to reduce the risk of wildfire near the community.



The wood is transported to the nearby saw-mill, where a Biomass Wood Chipper reduces it to the suitable size.

The chips are loaded into the forced air dryer which uses a proportion of the heat from the system to dry the fuel to less than 13% moisture content.

By dramatically reducing the amount of diesel being used in the community this system reduces the amount of Green House Gas (GHG) being emitted each year and reduces the risk of dangerous fuel spills.

With the units installed and ready for operation in the Spring of 2017, these units are already providing valuable employment, skills training and improved energy independence for this northern community.

Chief Donny Van Somer, who has been vital in pushing to have this unit brought to Fort Ware, notes "It's important for all of us to think of better ways to generate and use energy in our communities, both here and across the country."