

CASE STUDY

EARLY START TO LOWER CARBON FUTURE

School uses efficient wood pellet heating for a safe and comfortable learning environment

There's a bright future ahead for low-carbon, locally sourced wood pellets to help educate future community leaders in New Brunswick.

"We're helping to fuel the future. At several schools, we provide a low-carbon heat source for New Brunswick children who will need a society less dependent on non-renewable energy," said Jonathan Levesque, General Manager for Biomass Solutions Biomasse (BSB). "The potential in biomass to help our future in Canada is bigger than people imagine."

The wood pellet boiler at Hanwell Park Academy is one of the latest BSB installation projects.

The 10,500-square-metre Hanwell Park Academy can accommodate 650 students, 65 teachers and support staff. The expansive facility includes 37 classrooms, two gymnasiums, music rooms, performing arts, library commons, breakout spaces, project rooms, early childhood spaces and an adult training centre.

Levesque said the school needed a reliable and efficient heating system that requires minimal maintenance. BSB installed a Herz Firematic 350 wood pellet boiler in the school with an outside silo. The Hanwell school burns about 80 tonnes of wood pellets annually.

"Hanwell was new construction, so the boiler room was designed for wood pellets. Our drivers have easy access to the outdoor storage silo. It's a seamless system for the school. BSB provides annual maintenance and ongoing support for any issues," Levesque said.

BSB has installed wood pellet systems in three other schools, the Community College (CCNB) and the Université de Moncton (UDM) at the CCNB-UDM Shippagan Campus in New Brunswick.

"Schools are out during the hottest New Brunswick months, and most don't have widespread cooling

Hanwell Park Academy. Photo: Mark Rickard





Hanwell Park Academy's boiler room was designed to use wood pellets. Photo: Mark Rickard

systems. More schools could utilize pellet heat. A lot of them are hot water heat and easily converted."

Levesque said using waste wood to heat public spaces like Hanwell School shows a commitment to New Brunswick's future. Canada's forest industry is highly integrated and maximizes the value of every tree harvested. Canadian wood pellets are produced entirely from sawdust, shavings, harvest residues, and low-quality pulp that have been rejected by the other traditional forest sectors.

BSB uses third-party contractors to deliver most of its pellets but does have a truck with a scale for smaller bulk delivery. Pellets to fuel the Hanwell boiler come from the Group Savoie pellet mill, which has a 90,000-tonne annual capacity.

Levesque said the more cost-efficient Herz boiler system has made biomass heating more competitive compared to customized alternatives BSB used in institutional facilities.

"We are more successful with the Herz product because of the more compact design and lower costs."

Levesque said the Herz units are new to North America, but the systems are heating mainstays throughout northern European countries like Austria, Sweden and Finland.

HOME-GROWN ENERGY INDEPENDENCE

Levesque said the momentum of adopting biomass heating solutions for New Brunswick public spaces is increasing. Governments and communities

are recognizing the advantages of wood pellets—a sustainable local fuel source, efficient heat and low carbon output at schools, hospitals and other facilities.

"We don't need to export fuel that can used domestically. Biomass can offer New Brunswickers energy independence from imported fossil fuels. It is also way cheaper than fossil fuels."

— Jonathan Levesque

He said the push to "electrify everything" in the province has dampened, with rising power rates and utilities straining to meet increased electrical demand and peak loads.

"Biomass is there is help shave the (electrical) peak during winter for New Brunswick and other provinces. Pellets or wood chips are like mini batteries; they are an on-demand type of heat."

He pointed to Yellowknife, Northwest Territory as an example of a community taking advantage of the energy stored in biomass. Yellowknife has become one of the most biomass-intensive cities in Canada.

"There's no reason why in New Brunswick and a lot of places in Canada shouldn't be using our local resources. Thirty-seven per cent of all heat in Austria is from biomass. We have the resource; we just don't use it."