

Energy efficiency helps sawmill stay on the cutting edge

Alberta lumber producer saves power with energy-smart technologies



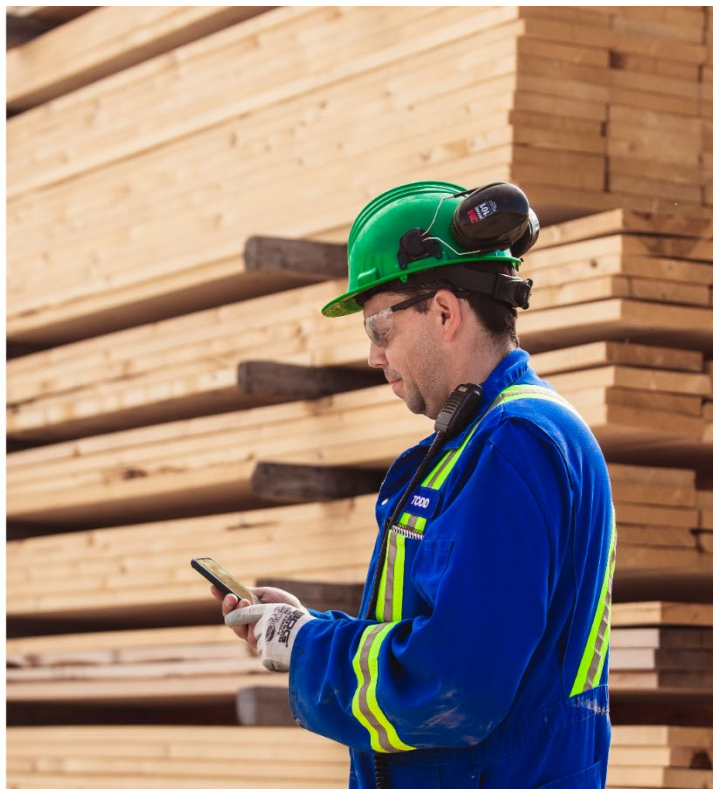
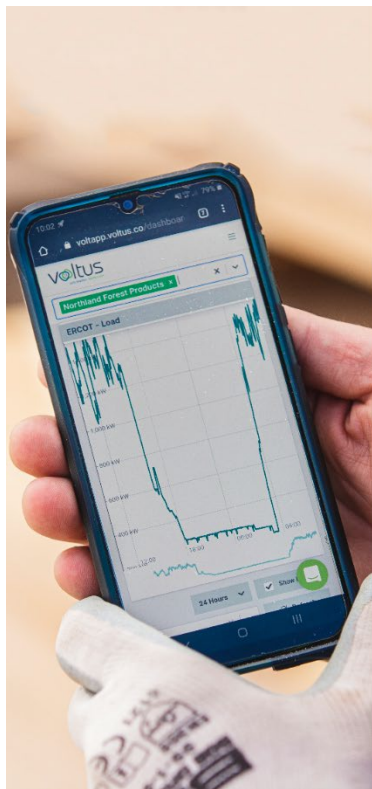
Cutting down on energy waste

In the lumber industry, being at the leading edge of innovation can be game-changing for a company's competitive advantage. At one Alberta sawmill, new energy conservation measures are helping to improve operational efficiencies, create cost savings and advance the mill's sustainability journey.

Located about a 15-minute drive north of Fort McMurray, Northland Forest Products Ltd. is a family-owned sawmill that produces dimensional lumber. The mill processes over 400,000 board

feet daily (about 40 houses' worth of building material) employing more than 60 people full-time and another 150 seasonal workers in logging and reforestation every year.

Established in 1970, Northland's focus on efficiency and sustainability has in recent years led to an expansion of their product line to include wood chips, hog fuel, shavings and sawdust. They have also developed systems to consume the remaining residual waste, converting it into thermal energy which assists in drying the lumber and heating buildings on site. These innovations have allowed Northland to achieve their goal of using 100 per cent of the wood fibre brought into the mill.



With new technology to monitor their energy data via mobile application, Northland is able to see their energy usage in real-time.

Focusing on energy efficiencies and seeing results

In an effort to challenge themselves to do even better, Northland turned its attention to energy management by joining the Strategic Energy Management program. Forming an energy team in May 2019, they set a goal to reduce overall power use by two per cent.

An early change was to replace some of the belts that move logs along the line. They upgraded some of the standard wrapped (i.e. smooth) V-belts to notched V-belts, which run cooler, last longer and are about two per cent more efficient. Other technology changes included replacing HID lights with more energy-efficient LEDs, adding photo-sensors to control exterior lighting and installing a real-time power monitoring device to optimize electricity use.

Improving the efficiency of the air compressors used in operations was another big win. Program experts identified a list of individual areas which armed Northland with helpful information. Northland then engaged their maintenance staff to begin implementing compressor leak detection activities and fixes.



Identifying and addressing leak points has helped improve the energy efficiency of their air compressors.

Since the program began, Northland has reduced their power use by 190,655 kilowatt hours, saving them nearly \$12,000 on electricity. This two per cent reduction is just the beginning. Northland predicts further reductions of potentially 2-3 per cent in the coming year. And their

journey will not end there—Northland is also looking at the possibility of solar implementation given the significant space available in their yard and on top of existing structures.

“Participating in the SEM program was an opportunity for us to take a second look at how we were doing things and find ways to continue to move the needle in terms of efficiency. The program helped highlight that efficiency and sustainability are journeys not destinations.” – Craig Ewashko, Owner