The Gaspé Spec

ESTABLISHED • MAY 1975

VOLUME 44 / NO 19 / MAY 16, 2018

Contract 40119680
$1.50 (Tax included)

McInnis Cement plans to reduce greenhouse gases

Gilles **Gagné**

PORT DANIEL – McInnis Cement will look for ways to reduce its greenhouse gases a few years down the road through a partial substitution of petroleum coke by wood residues in its kiln. That substitution could reach 30% of the present petroleum coke consumption and would consist mainly of residues produced by Gaspesian sawmills.

The kilns at the Port Daniel plant generate 600,000 tonnes of greenhouse gases annually. The facility's total emissions reach a minimum of 1.76 million tonnes of such gases per year when the extraction and crushing of limestone steps are included.

"The goal is to use 30 percent of (wood) biomass. We think that we could use 100,000 tonnes of forest biomass but there is no ceiling quantity and no deadline," says Alexandre Rail, vice-president of McInnis Cement's operations.

"The use of 100,000 tonnes of forestry biomass would cut the volume of greenhouse gases (at the cement plant)," says Amélie Saint-Laurent Samuel, project manager in forestry biomass for Nature-Québec.

Those numbers are contained in the pre-feasibility study carried out by the *Association coopérative forestière régionale de la Gaspésie*, in collaboration with McInnis Cement and the Environmental surveillance committee. The *Association coopérative forestière régionale de la Gaspésie* is a group of eight forestry cooperatives working together on different stakes. The Saint-Elzéar sawmill is a member of that group.

McInnis Cement currently consumes 200,000 tonnes of petroleum coke annually. Petroleum coke is a highly pollutant oil refinery residue, cheap to acquire and renowned for its calorific capacity. If wood residues were to replace 30% of its petroleum coke consumption, the Port Daniel plant's yearly consumption would decrease to 140,000 tonnes.

"The supply of forestry biomass doesn't seem to pose a problem," affirms Amélie Saint-Laurent Samuel, "because the Gaspesian forest generates a residual volume of wood nearing 1.2 million tonnes per year."

"There are 420,000 tonnes available for McInnis Cement. We are talking here about sawmill residues such as bark, wood chips, sawdust, shavings, residues from harvest, pulpwood and construction wood residues," she says.

"Burning wood fibre reduces greenhouse gas emissions compared to using petroleum coke because the regenerating forest replaces part of the carbon emitted by forestry residues' combustion," she further explains.

Photos: G. Gagné

Amélie Saint-Laurent Samuel, of Nature-Québec, and Alexandre Rail, of McInnis Cement, think that greenhouse gases could be reduced by 30% in relation to the plant's combustion process.

Rail transport would greatly help in the integration of wood fibre to feed the cement plant's combustion units, however, the line which passes in the middle of McInnis Cement's facility was put in a dormant state by the Quebec government three years ago. Reopening it could take two years.

Mario Pouliot, spokesperson of the *Association coopérative forestière régionale de la Gaspésie* and director general of the *Association coopérative forestière of Saint-Elzéar*, points out that the Gaspé Peninsula sawmills would greatly benefit from the adoption by McInnis Cement of wood residues to heat its kilns.

"The closure of many pulp and paper mills over the last 15 years has created several problems, including the difficulty of selling forestry residues," he says.

"We have woodchips that have been idle in the yard for a year-and-a-half, for a total of 5,000 tonnes. We accumulate 450 tonnes of bark per week, and we have a taker for 60 tonnes. For sawdust, it is 150 tonnes. We can sell our shavings. We receive $20 per tonne for woodchips. It is 70% less than five years ago. Before the closure of some pulp and paper mills, we used to get $125 for a tonne of woodchips," explains Mr. Pouliot.

The importance of the investment required to land the use of forestry biomass at McInnis Cement will be known in a year, after the realization of a feasibility study.

"The cement plant is equipped to use wood biomass in the combustion process," says Alexandre Rail, who adds that the investment would be related to a reception location for the material.

Mario Pouliot thinks that McInnis Cement and the Gaspé Peninsula forestry sector can benefit highly from the use of wood residues to fill part of the kilns' needs.

"This is the factor that will allow the Gaspé Peninsula forestry sector to stay healthy," sums up Mario Pouliot.

He believes that a centralized location to prepare the wood fibre before sending it to Port Daniel will be necessary. The optimal centre to set it up has to be determined. It would most likely be in the Bay of Chaleur area, considering the presence of three sawmills, Groupe GDS in Pointe-à-la-Croix, Temrex in Nouvelle and the *Association coopérative forestière* plant in Saint-Elzéar.

"Rail transport between the preparation centre and Port Daniel could be very useful. I don't see all that fibre coming to the cement plant by truck," stresses Mr. Pouliot.

Given that 100,000 tonnes of wood residue could be used by McInnis Cement, and considering that about 30 tonnes of dry fibre can fit in a railcar and 15 tonnes in a truck trailer, the number of transport units to get that material to Port Daniel is significant.

It would take approximately 3,300 carloads or 6,600 truckloads to feed the cement plant kilns with wood fibre, or a middle way combination of both transportation modes.

Rail transport is not expected to be available in Port Daniel before 2020 but setting up any centralized facility to prepare the wood fibre slated for the cement plant will also take at least a year once the feasibility study is done in 2019, says Mario Pouliot.