



SUPPLY AND DEMAND OF RESIDUAL BIOMASS IN THE INTERIOR

Historically, forestry trucking operations in the BC Interior have been focused on the transportation of sawlogs from the forest to the sawmill. However, we have increasingly experienced a trend to bring more biomass from the forest to pulp mills, pellet plants and energy plants. A look at the outputs from a BC fibre model quantifies the history of this trend and the forecasted increase in the demand for the consumption of non-sawlog fibre acquired from post-harvest roadside operations.

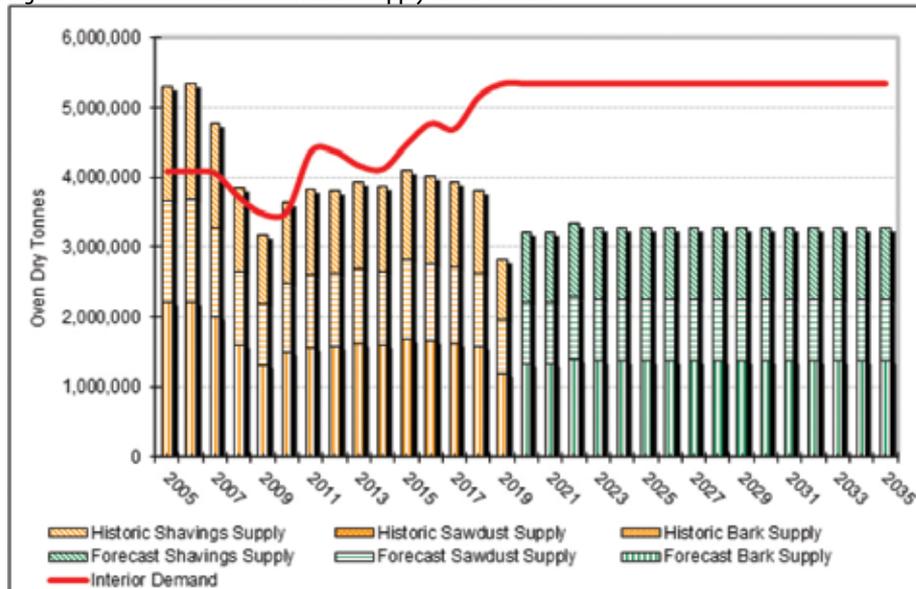
The industrial consumption of non-sawlog biomass across most of the BC Interior has increased significantly over the past decade. This increase in demand was brought on by three principle factors that have evolved since 2008:

1. Fibre demands from the construction of six new pellet plants.
2. The 2007 BC Energy Plan that subsequently resulted in: two electricity power purchase contracts (i.e., electricity purchase agreements or EPA) to stand-alone biomass independent power producers; four EPAs to sawmills; and seven EPAs to BC Interior pulp mills.
3. A decrease in the number of sawmills including over 30 permanent closures, 13 of which were in the last five years. Fewer sawmills means a reduction in the supply of sawmill by-products (sawdust, shavings and bark) and a corresponding increase in the demand for post-harvest roadside logging waste.

Until about 2010, most of the residual fibre users in the BC Interior were able to meet their residual fibre demands with supplies from sawmill waste. As pulp mill bioenergy plants started to come on line in 2011, the spread between sawmill residual supply and demand began to grow. Since many pellet companies did not have long-term supply agreements in place, a few were forced to shut down, while others began to supplement sawmill residuals with post-harvest roadside logging residues or pulp logs.

The change in the supply and demand for residual sawdust, shavings and bark

Figure 1. BC Interior Residual Biomass Supply and Demand



Courtesy of BC Fibre Model – IFS Ltd.

across the BC Interior (Figure 1) demonstrates where historically the gap between sawmill residual supply and demand averaged about 600,000 oven dry tons (ODT) per year from 2012 to 2018; that gap was close to two million ODT in 2019 and is forecasted to stay at this level.

For pellet and bioenergy plants to operate, this supply must be filled with the next cheapest alternative source of biomass. Typically this is roadside logging waste and standing pulpwood timber. The question of whether or not there is sufficient economic roadside logging residues to satisfy demand is ongoing. Improvements in logging practices and recovery methods are evolving to improve supply; however, supply is linked to logging activity and terrain. Depending on the region, the level of economic post-harvest biomass that exists at roadside may not be there.

This is where government programs like the Forest Enhancement Society of BC (FESBC) can play a key role. Projects funded by FESBC have helped minimize wildfire risk, improve low-value forests, re-plant damaged forests and utilize fibre that would otherwise be burned, which in turn reduces carbon emissions. Several pulp and pellet mill companies have capitalized on these funding initiatives to support their

operations in an environment of declining supply of sawmill residuals. Instead of licensees burning waste piles or pulp logs that would normally be too far from the mill, or cost too much to salvage, FESBC pays the incremental cost to salvage this material, beyond what the market might otherwise afford. Thus, the fibre does not get burned, but supports the mill and truckers working to haul the biomass fibre to the mill. Offsetting incremental haul costs, salvaging fire damaged stands or reducing carbon emissions is a win-win for all BC residents.

Notwithstanding this government program, some of the biomass electricity purchase agreements held by independent power producers are scheduled to expire in the next one to 10 years. It remains questionable which biomass electricity contracts will be renewed and which will be terminated, given that BC Hydro is long on power and does not really need the electricity. If renewed, it means cleaner air and more jobs for the truck logging industry. Hopefully the regulatory agencies see the benefit in that.▲

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