

Bell Loggers support renewable energy creation at Coega Biomass Centre

There is a lot of good news emanating from the Coega Special Economic Zone (SEZ) north of Gqeberha on South Africa's vast Eastern Cape Coast.

First, there's an international company that has invested in an innovative idea to turn invasive tree species into a source of sustainable renewable energy while creating jobs and earning valuable foreign exchange for its host country, South Africa. Then this same company is empowering local timber harvesting contractors by utilising their services, so sustaining more jobs and with an unprecedented benefit, assisting them in buying the mechanised equipment they need while enjoying the use of it.

The company creating this positive energy is a subsidiary of an international company based in the Netherlands and is aptly called the Coega Biomass Centre. Here

we meet Emiel Hanekamp, Manager Biomass Supply and Sustainability, who tells us more about what this innovative company is doing: "We are producing wood pellets as a source of energy and heat for export to Europe as the South African market for these pellets is still under development. In addition, we produce wood chips for both the European and local energy markets.

"We use invasive tree species such as eucalyptus, pine, and wattle as our feedstock. While we pay the contractors who extract the timber for us, we don't charge the landowners or farmers where the timber is sourced and they in turn are happy to be rid of these and

other invasive species that are generally heavy on the water table. We're proud to say that we use 95% of the timber that we extract, compared to a pulp or saw-log operation where as much as 30% of the biomass is left behind, which can be considered a potential fuel load for forest fires."

"All land where harvesting takes place is 100% under internationally recognised Forest Stewardship Council (FSC) certification and while all current harvesting operations are motor-manual, there is the potential to develop this partly into mechanised harvesting," says Willem Jacobs, General Manager of Bio-Logistics Africa, a company contracted by



Coega Biomass Centre that has been overseeing the timber harvesting since 2019. "We're currently harvesting timber in a radius of 175km from Coega, which extends from the Bloukrantz River to East London and inland to Jansenville."

"The larger part of our feedstock timber, in fact about 75%, is transported to our plant here at the Coega SEZ in round log form. The balance is chipped on site leaving only stumps and thin branches behind," Emiel continues. "At our plant, the inbound truck carrying the timber crosses a weighbridge to determine the mass and therefore costs and unloads the timber onto a stockpile."

From this point on the timber enters a chipper, which drastically reduces its size. The smaller fibres

are dried to contain only 15% moisture and then compressed into pellets, which are cooled.

"The pellets we end up with are 100% wood with nothing added as the lignin in the wood acts as a natural binder. When these pellets are burnt, they produce very little ash, making them an ideal source of heat and energy," Emiel says. "We're excited to have exported our first 10 000 tons of wood chips to European markets as breakbulk at the end of August 2023 and we plan to export the first pellets at the end of 2023. In a few years, we will export at least 120 000 tons of pellets per year."

"On the harvesting side, we make use of contractors and former out-of-work forestry workers who have the basic knowledge and some experience of this type of work," Willem explains. "We

currently use four harvesting teams and 45 people infield. The harvesting side is also under the auspices of the FSC in terms of skills transfer and adhering to strict safety protocols, working in daylight hours only."

Willem expands on the fact that because the contractors were using older timber handling equipment that delivered availabilities of less than 20%, Coega Biomass Centre took a decision to assist them by buying two new Bell 225F Loggers from EdgeQuip, the Bell Equipment Forestry & Agriculture dealer based in the Tsitsikamma area.

"We were comfortable in approaching Mike Cowie, the Manager of EdgeQuip about what timber handling equipment to buy as we had bought spares and consumables from his company in

the past," Willem says. "What sets EdgeQuip apart as a dealer is that its owner, Danie Scheepers, is a timber harvesting contractor and with that link we obtained the best possible advice on what equipment to buy."

EdgeQuip suggested Coega Biomass Centre buys two new Bell 225F Loggers. Once ordered, the machines were delivered a mere two weeks later, on 5 May 2023, with one machine going straight into service in the Tsitsikamma region and the other delivered to the Coega Biomass Centre in the Coega SEZ.

"We're assisting the timber harvesting contractors by allowing them to rent the machines from us with those rental charges taken as

instalments to pay off the machines so that they end up owning them," Emiel adds. "This creates a win-win situation for all concerned as the contractor gains equipment while creating sustainable employment and we in turn are assured of an ongoing supply of timber feedstock for our plant."

"Being familiar with Bell Loggers from past experience, we've been impressed with how much quieter the new F-series Loggers run with the Yanmar engines, and with an average fuel consumption of around five litres an hour they are quite economical," Willem says.

"They also seem more powerful and with average utilisation of seven hours a day, this greater

power translates into less operator fatigue resulting in safer operations infield and on loading areas."

Coega Biomass Centre bought the Bell 225F Loggers with extended warranties to 2 000 hours or two years and during this time all servicing will be done by EdgeQuip's mechanics.

"We as Coega Biomass Centre are proud that we can be part of the global transition away from fossil fuels to renewable energy forms while assisting others in creating and sustaining jobs and becoming owners of reliable timber harvesting equipment such as that which Bell Equipment designs and builds," Emiel says.



Emiel Hanekamp (left), Manager Biomass Supply and Sustainability, with Willem Jacobs, General Manager Bio-Logistics Africa with an older Bell 225A Logger at the Coega Biomass Centre.

