

# Waste heat becomes profitable district heating

Södra Timber Kinda has been operating a flue gas condenser from Opcon for two winters now.

“It has worked very well,” says Klas-Erik Säberg, operations manager at the Kinda sawmill.

All the heat from the flue gas condenser goes into the district heating network serving the people of Kisa. The Kinda sawmill is the only district heating supplier in the region. Most of the customers are larger companies and apartment buildings.

Södra Timber Kinda invested in flue gas condensation in order to sell eco-friendly district heating based on unutilised waste heat from the sawmill that doesn't require extra fuel. The sawmill's bio-boiler burns bark and wood chips to generate heat for the sawmill's driers and to supply the district heating network.

“Previously we had an energy deficit, as we consume a lot of energy drying timber. We need 10 MW for our own production and we have an agreement with the municipality to supply 5 MW per hour of district heating. We thought this was a good way of utilising heat that otherwise went straight up into the sky. We supplied to the district heating network before we installed the flue gas condenser, but sometimes when demand was high we had to burn oil for the boiler,” explains Klas-Erik Säberg.

## Free heat that we get paid for

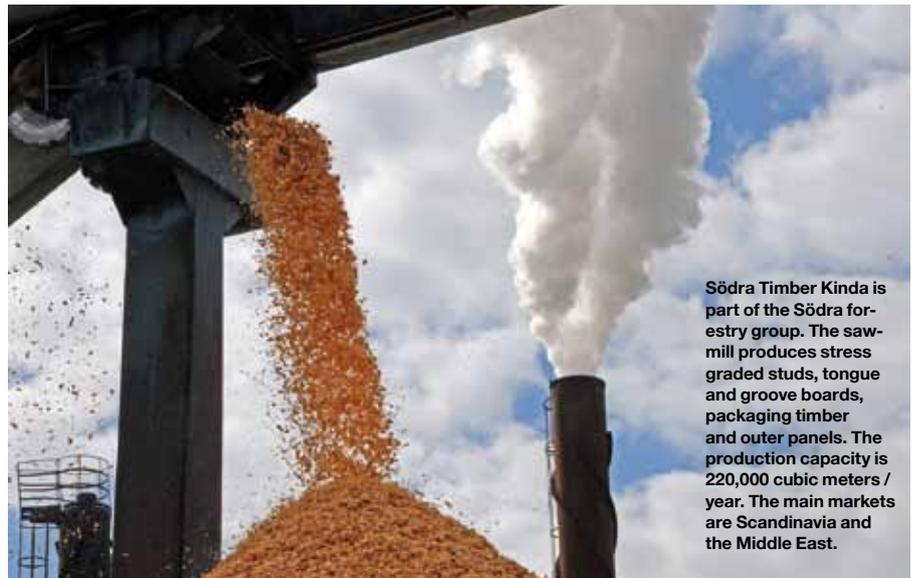
“The results have been good. At best we can get over 2 MW from the flue gas condenser. This is free energy and we can get paid for it instead of just discharging it into the atmosphere. It's a good investment. If we can supply over 5 MW we get paid much more. There is scope for increased supplies, but of course our first priority is drying the wood.”

The flue gas condenser is switched off in May when the summer arrives and residents only need hot water and the return temperatures from the district heating network are too high. They start up again in August/September, depending on the weather.

## Choose between full and partial flow

Södra Timber Kinda can choose between full-flow or part-flow condensation. If the district heating demand from the Kisa community is temporarily lower than normal, the plant can reduce the volume and operate a part-flow supply. But mostly they operate at full-flow as the requirement is usually above the 2 MW that the condenser can produce when the sawmill's bio-boiler is at full load and the

“Flue gas condensation is a great way to take care of things that you would otherwise burn up the chimney,” says Klas-Erik Säberg, operations manager at Södra Timber Kinda.



Södra Timber Kinda is part of the Södra forestry group. The sawmill produces stress graded studs, tongue and groove boards, packaging timber and outer panels. The production capacity is 220,000 cubic meters / year. The main markets are Scandinavia and the Middle East.

demand for district heating is greatest. In total they produce over 20 GWh of district heating per year.

“We can choose between full-flow and part-flow manually. The program can be automated, too. Sometimes there can be a small problem somewhere and we decide that it's better to run part-flow, but that doesn't mean we go down to just half production level, it just goes down a bit lower,” explains Klas-Erik Säberg.

Has the Kinda sawmill had any problems with their investment in flue gas condensation?

“Yes, every now and then. Mostly with the programming, it is supposed to be integrated into our existing boiler system. Last season there were more problems, but during this second season, I can say that there have almost been no problems at all. You can always call and get help from the support team, says Klas-Erik Säberg.

Prior to the investment in flue gas condensation, Södra Timber Kinda assessed Opcon and two other suppliers.

“Opcon had a solution that we thought looked sensible and price-wise it seemed right. The payback period was for three years for us, and that is very good,” says Klas-Erik Säberg.

In addition to utilizing flue gas for profitable energy, the flue gas condenser also reduces the amount of dust particles from the chimney.

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