



Fast pyrolysis

NER300

The project

Technology category: Bioenergy

Location: Pärnu, Estonia

Max. NER 300 funding: EUR 6.9 million

Final investment decision: June 2018 (estimated)

Entry into operation: June 2020

State of advancement

Pre-engineering has been done, investment decision is postponed for year 2018.

Outlook for coming year

Investment decision is planned for June 2018.

Outlook for coming 5 years

If decision will be made, entry into operation in the end 2019.

Project sponsor

Fortum Eesti AS

Project summary

The project involves the construction of a full-scale pyrolysis oil production plant linked to existing Pärnu CHP power plant. The planned annual capacity of bio-oil is 50 000 t/a corresponding to about 200-220 GWh of fuel. The intended primary raw material is wood chips.

Based on such a concept, the pyrolysis unit utilizes the hot sand of the fluidized bed boiler as a heat source. The devolatilized compounds from biomass are condensed into bio-oil and the remaining solids, including sand and fuel char, returned to the fluidized bed boiler. In the boiler, the remaining fuel char is combusted together with non-condensable gases to produce heat and electricity. Once produced, bio-oils can be shipped, stored and utilized much like conventional liquid fuel.