Carbon capture plant in Rauma, Finland

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Metsä Group has initiated a pre-engineering project for its first commercial biogenic carbon capture plant, with a planned nominal capacity of 100,000 tonnes of captured wood-based carbon dioxide per year. The facility would be located at the company's Rauma pulp mill in Southwestern Finland and would capture CO_2 from the mill's flue gases. The company has submitted an application for a reverse auction organised by Finland's Ministry of Economic Affairs and Employment to secure investment aid for the clean transition project.

The planned capacity represents an initial step toward a larger scale, with the long-term capture potential of wood-based carbon dioxide at Metsä Group estimated at several million tonnes annually. Captured carbon dioxide could serve as a raw material in the chemical and fuel industries, replacing fossil-based products. Annual use of 100,000 tonnes of wood-based carbon dioxide in the fuel value chain could avoid fossil emissions comparable to the annual emissions of nearly 30,000 passenger cars, according to Metsä Group.

An environmental permit application for the plant was submitted in December 2025, with an official permit decision expected later this year. The public financing applied for is limited to a maximum of 30% of the total investment. An investment decision could be made at the beginning of 2027 at the earliest, contingent upon a positive grant decision, environmental permit, completion of the pre-engineering project and confirmed customer demand.

Metsä Group piloted carbon capture technology at the Rauma pulp mill in 2025 in collaboration with Andritz. The pilot demonstrated that the technology was sufficiently mature for controlled upscaling, the company stated. The main uncertainty for the project relates to market development, as industrial value chains utilising wood-based carbon dioxide are still being built.