

ANDRITZ BioCircleToZero PROGRAM SEES NEW DEVELOPMENT PROJECTS

In a vital effort to double the value of wood being utilized at pulp mills, last year ANDRITZ launched the BioCircleToZero program. The initiative is already gaining significant pace with three ongoing development projects launched: SAUNA, H₂ELP, and CirBRes.

The five-year initiative, led by ANDRITZ and supported by Business Finland, has been set up to encourage cooperation and R&D efforts with companies, research institutions, and universities working in the field of forest products development. Johan Engström, Chief Technology Officer at ANDRITZ Finland says, "We simply have to get more value out of wood by burning less and increasing pulp yield by utilizing side streams such as lignin and biomethanol or creating high value bioproducts such as fiber-based textiles.

"The BioCircleToZero program, with its intense combined innovation and effort, can realistically see a doubling of the value of wood into the future."

"Our mission is to create high value bioproducts across value chains and to bring new products to the market. We believe the CirBRes project will go some way to support this journey."

Naveen Chenna
Director Research & Innovations, Pulp & Power, ANDRITZ

The three ongoing development projects accelerating the BioCircleToZero program:

CirBRes – GLOBAL CENTER FOR SUSTAINABLE BIOPRODUCTS

The mission is to facilitate international collaboration and exchange of knowledge to advance the bioeconomy sector. Through collaborative research in fundamental science and engineering, as well as economic, environmental, and social assessments of future biocomposite products, the GCSB seeks to promote sustainable and inclusive bioeconomy practices. Åbo Akademi and other universities in Finland have the project lead, and several international partners are involved, including leading Veturi companies such as ANDRITZ, Mirka, and Nokian Tyres, as well as Stora Enso and Boreal Bioproducts.

H₂ELP – H₂ PRODUCTION LIFETIME AND PERFORMANCE EXTENSION

H₂ELP is a research and innovation project aimed at reducing the levelized cost of hydrogen and methanol production by improving system performance, lifetime, and operational practices under dynamic Nordic conditions. The project is carried out together with the VTT Technical Research Centre of Finland and industrial partners, including Vaisala and Fortum, which combine research

"In H₂ELP, lowering the levelized cost of product is a critical enabler for accelerating the large-scale deployment of green hydrogen and its derivatives, strengthening their competitiveness, and enabling wider, faster market adoption."

Thomas Kohl
Technology Director Renewable Fuels,
ANDRITZ

expertise with real pilot and laboratory environments. Through hands-on collaboration across the hydrogen value chain, H₂ELP supports faster deployment of commercially viable hydrogen and Power-to-X solutions. The project is part of the Veturi Co-Innovation initiative funded by Business Finland.

SAUNA – SUSTAINABLE PULPING INNOVATION ACHIEVING ZERO POLLUTION THROUGH EFFICIENT WOOD RESIDUE FEEDSTOCK UTILIZATION

The SAUNA project is part of the Horizon Europe program that aims to strengthen the European green economy with a focus on achieving zero waste and zero pollution biorefinery operations. SAUNA is an EU funded project aiming to develop an innovative pulping method that increases product yields and cuts emissions.

The project addresses enhanced environmental performance of pulp production by developing a novel wood fractionation concept where chemical recovery, environmental life cycle and sustainability, unit operations, and energy sources are reevaluated by 11 expert partners, including five companies that represent a wide range of expertise from production level to end user companies, four research institutes, and two universities.

PARTNERS ARE KEY

Through these projects, the BioCircleToZero initiative is clearly making rapid progress toward more sustainable and valuable use of forest resources.

"The targeted outcome for a SAUNA project is a scalable technical solution for a sustainable biorefinery with integrated pollution prevention and monitoring strategies covering air, noise, water, and soil."

Markus Paananen
Manager, Fiberline Technology R&D,
ANDRITZ

Kari Tuominen, CEO of ANDRITZ Finland says, "This is an extremely important initiative. At ANDRITZ we have always been known for developing innovative new technology that is well received by our customers.

"Although we are leading the BioCircleToZero program, our partners are key in any new development that enables the creation of added value from wood."

CONTACT

Johan Engström
johan.engstrom@andritz.com

Discover
more!

