

Sweetwater partners with Estonia's Graanul *Biorefinery in Europe to use Rochester company's technology*

By: [Gino Fanelli](#) May 4, 2018

Rochester's Sweetwater Energy has announced a new partnership with an Estonian wood pellet producer, AS Graanul Invest, to build a new, commercial biorefinery using Sweetwater's Sunburst technology.

Sweetwater's tech is a complicated process that, ultimately, results in a clean, sustainable production of usable fuels and products identical to ones based in petroleum. Essentially, Sweetwater is able to break down wood and other plant matter into lignin, an organic polymer found in plant cell walls which grant them structural integrity, and cellulosic sugars, which can be used as a source of carbon for fuels.



"What that means is we can basically make anything out of trees and plants as you can out of petroleum-based products and corn sugar," said Sweetwater Chairman and CEO Arunas Chesonis. "So any fuels or chemicals or packaging materials, building materials, any of the stuff we use a barrel of oil for, because that's really just 100 million year old version of carbon in crops."

That process is also more sustainable than using traditional fossil fuels, using less water and energy to break down the wood into its core components.

"We don't like overusing the terms 'sustainable and green,' but they're real," said Sweetwater President Jack Baron. "If you think about carbon, as trees grow and plants grow, as they absorb carbon at night, they are made almost entirely of carbon, and that's what eventually becomes oil in 100 million years. But we can take this modern carbon that got pulled out of the atmosphere, ingested by the trees."

Founded in 2003, Graanul is the largest wood pellet producer in Europe, with 11 facilities operating in Latvia, Estonia and Lithuania, and holds a distribution network across the entire continent. Merging Sweetwater's tech into the plant will bring the products that can be made using the processes across the company's entire economic footprint. The raw materials to be used by the facility will be pulled exclusively from sustainable crop sources.

Today, alongside production of wood pellets, Graanul operates six combined heat and power plants operating around the facilities in Latvia and Estonia, which have a total power output of 31 MW of renewable energy. The company plans on establishing a power plant to stand beside each of the wood pellet processing facilities. The majority of processes carried out by the plants are powered by renewable fuel sources, and works in the forestry sector to ensure certified sustainable wood sources for all of their pellet production.

"As a global leader in biomass processing, Graanul has been focused on green objectives," says Peep Pitk, research and development manager for Graanul, in a statement. "With Sweetwater and our partners in Europe, this large-scale innovation

will allow us to convert virtually 100% of the sustainable and renewable wood processed using this technology into high value carbon products that people use every day."

If all goes according to plan, the facility, which will process 50,000 tons of locally sourced hardwood each year, is set to have the first phase of the plant completed by fall 2019. The plant will be the first to integrate the Sunburst pretreatment process.

"The reason they're so excited is that they've been looking for several years around the world for technology that could do this," Chesonis said. "They process about 3 million tons of wood per year to make wood pellets, they're the biggest wood pellet producer in Europe, for both home use and commercial use. It turns out to be better for the environment than using petroleum or coal or something like that. It's very green in the scheme of things."

Sweetwater was founded in 2009 out of RIT's Venture Creations incubator, and alongside the new contract with Graanul, is plotting some big moves over the next few years. The company has Minnesota and South American plants on the horizon, in addition to a local facility to be leased at Eastman Kodak Business Park.

"We plan to begin the ordering of the equipment process later this month," Chesonis said. "The reality is that these products will be shipped around Europe, but I don't imagine them going outside of Europe. ... What this means for us is that this is a pretty large partner for us in Europe. Their expectation is, they built in 15 years, from scratch, 11 wood pellet plants, and they've got that existing infrastructure and distribution network, all of those people and resources that they have, they think that they can build a similar number of Sweetwater-type plants over the next 10 years. There's three individuals who really run and are in charge of that business, and they're really looking to double or triple the size of their company."

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