

Corrections to the media release: the title and ingress of the earlier media release said that CO₂ emissions would be reduced throughout production. However, the emission reduction only applies to heat production.

Terrafame's heat production CO₂ emissions will soon decrease by 90 percent – again new investments in Sotkamo area

Terrafame and Adven will soon work together to reduce the carbon dioxide emissions of Terrafame's heat production by almost 9,000 tonnes. In practice, a drop of more than 90% in emissions is expected to be reflected in 2021. The new energy plant, which will be completed this year, the recovery of excess energy and the new investments in the district heating network in the mining area, which have now been agreed with Adven, will ensure the reduction of emissions.

Terrafame and Adven have been cooperating on a large scale in developing energy efficiency and energy production as well as reducing emissions for several years. Adven is currently building a renewable energy plant to supply energy Terrafame's new battery chemicals plant. Construction of the energy plant is expected to be finalized in November 2020.

In addition, Adven and Terrafame have utilized the excess energy of the hydrogen plant in the district heating network in the area. The project received investment support for new energy technology from the Ministry of Employment and the Economy. Now Adven and Terrafame have agreed to expand the district heating network to a mining depot, replacing the light fuel oil currently used in the area. Together, all the different measures will bring about an annual reduction of 9,000 tonnes in CO₂ emissions.

“The cooperation has worked well and that is why we will continue it with Adven. The main reason for the actions that are being taken now is, of course, the benefits we have received in terms of cost savings and a reduction in our carbon footprint”, says **Matti Rautiainen**, Terrafame's Chief Maintenance Officer.

Mining depot to be included in the district heating network

Terrafame's mobile mining equipment is maintained and repaired at the mining depot. The current maintenance hall is about 3,000 square meters. The mining depot has previously been heated with light fuel oil.

“The depot is about three kilometers away from the metals production site and we are now building district heating pipelines as well as water piping and fiber optic cables. Our cooperation with Terrafame has developed into a good partnership, where both have a strong will to find emission reductions and cost-effective solutions. In addition to this, we will be delivering district heating to another hall of similar size nearby the mining depot which is being built by Terrafame's partner company”, says **Arto Liikanen**, Adven's Account Manager.

Heating the depot with district heating is a more cost effective solution for Terrafame.

“We wanted to build district heating pipes for the depot, which will provide clean energy for the depot. In terms of energy costs, now we are in about a third of what they would be with light fuel oil”, Rautiainen says.

Adven is also developing a refueling point at the energy center to meet the newest requirements.

Terrafame's battery chemical plant is an investment of approximately EUR 240 million and will start operations in 2021. In the battery chemicals plant, Terrafame's current main product i.e. nickel - cobalt sulphide intermediate is further processed for use as raw materials in electric vehicle batteries. The availability of nickel and cobalt is a critical factor in the strong market growth of electric vehicles.

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Terrafame

Terrafame Ltd is a Finnish multi-metal company founded in 2015. Its mine and production plants are located in Sotkamo, Finland. The company's bioleaching-based production process is unique and it has a much lower carbon footprint than conventional nickel production technologies. Terrafame is currently constructing one of the world's largest battery chemicals production lines, which will move the company ahead in the metal refinery chain from a manufacturer of intermediate metal products to a producer of battery-grade chemicals used in electric vehicle batteries. In 2019, Terrafame's net sales amounted to EUR 310 million, and the company's industrial site employed approximately 1,500 people, of which around half were employees of its partner companies. www.terrafame.com

Adven

Adven is the leading provider of energy and water services across the Nordic and Baltic countries. For industries Adven produces industrial steam, heat and cold as well as provides utility and processing solutions to improve energy, water and material efficiency. For real estate segment Adven produces heating and cooling based on district heating or property-specific solutions applying for instance bio- and geoenergy. Our business model is based on full service and long-term partnership. Our annual turnover is over €216m, and our total balance sheet is €800m. We have almost 40 years of experience, and we employ about 400 specialists. We operate more than 300 sites with total capacity of 1900 MW. www.adven.com