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Cargill cuts all CO2 emissions in the north

A new electric feed dryer machine will cut energy consumption drastically and make Cargill's factory at Bergneset in Balsfjord, Norway the world's first zero-emission feed factory.

– We have a large responsibility when it comes to reducing the energy consumption in the industry, and this is a golden opportunity to do so. We are highly invested in this project and it creates great interest and a ripple effect within Cargill, says Monica Hagen, Business Operations Lead, Cargill Aqua Nutrition North Sea.

The factory at Bergneset is the first in the industry to put this zero-emission technology to use to reduce the CO2 footprint. The investment is part of Cargill's strategic improvement effort and in line with Enova's goal of promoting innovation of energy and green technology that can contribute to reducing greenhouse gas emissions. Enova has supported the project with NOK 33 million.

– The funding from Enova makes up 40 % of the total costs and are essential to financing it. The rest we contribute ourselves, says Hagen.

Since 2019, Cargill has invested nearly NOK 200 million in initiatives for energy efficiency improvement and sustainability in the feed factories, and the Bergneset project is the third step in this investment line.

Saves energy – cuts CO₂

By switching from fossil fuel to electric power the factory cuts CO2 emissions by 3000 tonnes yearly. Simultaneously, the factory's energy consumption is reduced by more than 20 %.

– When we replace gas with electricity and combines this with heat pumps, we use 3,5 times less energy. Merging heat pumps and electrification is ground-breaking and we are the only ones doing it in this type of industry. Feed drying is our most energy consuming process, so carrying out this project means a lot. We are to save 15000 kWh and 3000 tonnes CO2 a year, tells project manager Jan Helge Førde, who has been in charge of the project for two years.

Creates pride

The dryer, the world's largest of its sort, is delivered by Geelen Counterflow in the Netherlands, a family business that develops eco-friendly drying and cooling installations. Cargill has also received support from Norsk Energi and Process Innovation in Denmark.

– This project is driven by energy optimalization and sustainability. The investment does not yield increased capacity, but reduced energy consumption and a cleaner production as we cut all CO2 emissions. Saving CO2 taxes on top of this is a nice bonus, and not least there are many employees who appreciate us spending time and resources on sustainable projects. This creates pride within the company, Førde says.

Highly relevant technology

Monica Hagen says this technology will be highly relevant when similar investment needs occur at other feed factories, and also promotes motivation for new thinking in other processes.

– This is the largest innovation project we have ever carried through. We are lucky to have an owner willing to invest and who wants to develop our factories in the right direction. Cargill is good at drawing synergies from factories across the national borders. If this succeeds in Norway, we may see similar technology introduced to factories worldwide. We are proud to contribute to sustainability in the north, and it's a great joy to us if we can create ripple effects through this project.

Facts:

- The new dryer is delivered by Geelen Counterflow in the Netherlands, a leading manufacturer of eco-friendly solutions.
- The dryer will utilize new and innovative technology for heat integration through high temperature heat pumps that generate a considerably more energy efficient process.
- It is the first time this technology is put to use in the feed industry.
- Cargill has also had technology delivered from Danish Process Innovation and Norsk Energi.
- Enova supports the project with NOK 33 million.
- The energy net result is estimated to a 15 000 000 kWh annual saving.
- The climate net result is estimated at a 3 030 000 kg CO₂-ekv/year.
- The factory at Bergneset is a cornerstone company in Balsfjord municipality that mainly employs local labour from Balsfjord and neighbouring municipalities. The factory has 54 permanent employees and more than 70 workers during the high season.