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Ben & Jerry turn ice cream into energy

Ben & Jerry's has become the first ice cream company in the world to power one of its factories using the by-products of ice cream

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The biodigester creates enough energy to make 16m pints of Ben & Jerry's ice cream per year.
Photograph: Ben & Jerry's

The BIOPAQ®AFR Biodigester – also known as ‘The Chunkinator’ – is up and running at Ben & Jerry's factory in Hellendoorn in the Netherlands, after a year of testing and a year and half of trial runs.

The Chunkinator is an anaerobic flotation reactor. Ice cream waste is fed into its tank, where 24bn natural micro-organisms break down the particles, turning them into biogas.

At the same time wastewater, used in keeping the factory clean, is also fed into the tank with the micro-organisms. What makes it original is that wastewater streams containing fat and oil are treated in one compact reactor, together with the degradable particles. This is in contrast to conventional systems, whereby this is only possible by going through a number of processing stages.

The biogas created by the biodigester is used in the factory's GreEnergy project, which acts like a battery by insulating water at the correct temperatures for ice cream creation and dramatically reducing the need for natural gas to heat the plant.

Reducing and reusing waste

Arjan Vloon, head engineer for the Chunkinator, says: “By its very nature, manufacturing produces waste. Our goal is to reduce waste first and then ask ourselves how best to use the waste we do produce in a productive manner. The biodigester gives Ben & Jerry's the opportunity to take what had been a waste product and turn it into a benefit for our business – producing our own energy!”

The initiative – which ties in with Ben & Jerry's core values of being good to the community and planet – is currently able to utilise all of the wastewater produced at the

factory, and about half of the litres of waste ice cream. It has created enough energy to make 16m pints of Ben & Jerry's ice cream in the past year.

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