

100 % Biogas Energy Recovery.
Using sludge-sourced biogas to produce steam.

| The challenge

When new regulations required Bonduelle to build a wastewater treatment plant for its food processing factory in Békéscsaba, Hungary, the company turned to Veolia, whose specialists suggested a solution using sludge-sourced biogas to produce steam.

As Veolia exploits the biogas successfully in Nagykőrős, Bonduelle decided to use biogas also in Békéscsaba:

- Recover available biogas produced by a wastewater treatment plant with UASB technology,
- Improve energy efficiency,
- Optimize energy costs which challenges solve the inventions using biogas.

| Veolia's solution

- · Renovation of the energy plant: 2 boilers in Békéscsaba,
- Adaptation of one of existing boilers for the combustion of biogas,
- Biogas parameters:

Pressure: 23-27 MbarTemperature: 35°C

- Production of steam at 180°C, 10 bar,
- Flexibility to adapt to seasonal nature of production.



Békéscsaba, HUNGARY



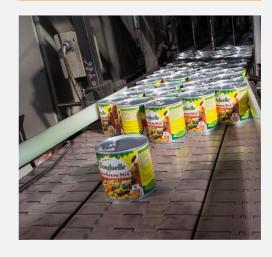
Contract Facts:

Duration: 16 years until the end of 2021 Type: O&M

100 % biogas energy recovery

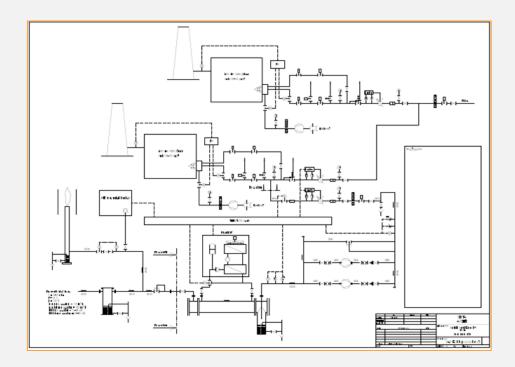
16-year contract

a.v.16 % reduction in energy costs



| The benefits

- Greener steam supply
- Average 16% reduction in energy costs (€100k/year)
- Biogas is cheaper by 20% than natural gas
- Continuous and secure supply of steam





The use of biogas reduces carbon footprint.

This technology increases energy efficiency.

14001 standards contributes to the compliance of environmental laws