



REFERENCE CASE:

Honkajoen
Biotehdas Ky

Modern biowaste treatment solution for municipalities

Watrec implemented a reliable and industry standards compliant biogas plant for Biotehdas. The plant serves municipal operators, among others, in the Kuopio region who wanted a modern, cost-effective, and ecological biowaste treatment solution.

A biogas facility for processing industry branch currents

Honkajoki in the region of Satakunta is home to Honkajoki Oy, a company that processes food industry offal waste and produces fertilizers, raw material for feed, animal fat as well as renewable fuel out of it. There are also other industrial parties in the area, which means that there is demand for the processing of biodegradable waste. Watrec built a biogas facility for Biotehdas Oy, to be used by Honkajoki Oy and other industrial companies for processing branch currents and municipal organic waste.

Watrec cooperated closely with Honkajoki Oy in the project's starting phase. In addition to Honkajoki Oy, a local electric company, Vatajankosken Sähkö Oy, entered the project as a partner. The company receives all biogas produced by the facility and processes it into electricity and heat.

Cost-efficient waste transfer

Already before the new facility was built, Honkajoki Oy used the services of another Biotehdas facility. The transport distance, however, was relatively long. The new biogas facility was built right next to the factory, which makes moving raw materials



easier: waste water sludge can be pumped directly from the waste water processing plant into the biogas facility process through a pipeline. Other branches are transported to the facility by truck. The transporting costs are thus kept very small.

Functional results with concept-based actualization

Before the Honkajoki project, Watrec had accumulated expertise from similar processes and created a functional concept as a result of a biogas facility project in Kuopio. This expertise was used as a basis for designing and building the plant in Honkajoki. Watrec's concept-oriented thinking guaranteed an efficient actualization and that the facility could be easily maintained and that it operates reliably. The facilities at Kuopio and Honkajoki use similar systems, allowing the staff to give each other advice and support.

The unusually large number of industrial customers can be seen at the Honkajoki facility in the form of several different food industry branch currents. Because of this, two lines for receiving different kinds of biodegradable waste were built at the factory.

The project at Honkajoki demonstrated that the preliminary processing line for organic waste de-

veloped by Watrec is also well suited for very dissimilar industry waste.

Proper planning to solve new kinds of challenges

A new challenge for Watrec was the terrain at the Honkajoki property. The property, which is located on a swamp, caused new challenges for construction, but Watrec was able to address them with proper planning, and to once again gain more experience with contract work.

Another difference to the facility in Kuopio was the Honkajoki facility's more sophisticated heat energy organization. The plant does not produce its own energy, but instead Vatajankosken Sähkö produces the waste heat from electricity production back to the biogas facility.

The goal of long-lasting cooperation was reached

As a part of biogas facility projects, Watrec always aims to initiate long-term cooperation with its customers and end users. Watrec wants to provide its customers with continuity and functionality. In Honkajoki this has been successful – Watrec continues to actively participate in the facility's operation and development.

"We have worked together with Watrec before, and it has always been great and flexible. Our needs as end users were addressed ever since the first negotiations regarding the project. Our cooperation has continued also after the facility was finished – we are regularly in contact with Watrec. We discuss and seek together new competitive solutions for us."

– **Matti Lehtinen**, Production Manager, Honkajoki Oy



TECHNICAL SPECIFICATIONS: Honkajoki Biogas Plant

Construction year: 2013–2014

Capacity: 60,000 t/year

Processed raw materials: Waste water sludge, organic waste organized by origin, packaged food industry waste, biodegradable food industry waste, rendering facility by-products

Work type: Turnkey delivery

Bioenergy production: Over 34 GWh/year; max power of produced biogas 3,5 MW

Production of organic fertiliser: 60,000 t/year

- Phosphorous 120,000 kg/year
- Nitrogen 300,000 kg/year

Watrec



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