

From Sludge to Biogas

13006 Gajwa

HGE Korea industrial is a renewable energy project developer from Korea. Adverio was contracted for the concept engineering, biological biogas analyses and feasibility study for the first combined sludge waste digester and water treatment facility in Korea.

The facility can process 275 ton/day of sludge 24/7, 365 days a year. The AD facility provides biogas to a CHP unit (electricity and heat) and the Drying Belt evaporate the water content of the solid digestate.

Adverio was selected with our network partner OHBE. We jointly worked on the pre-engineering and feasibility study, providing the client with direct access to state of the art biological knowledge and technology.



Brown Field Location

- Integrating new technology in existing water treatment facility.
- ✓ Adverio investigates the possibilities during a site visit.

Biological Tests

- The client wishes to process multiple sludge materials.
- ✓ Adverio performed multiple biological analyses to determine the biogas.

Waste Water Treatment

- Experience and analyses confirm the chosen technology.
- ✓ Adverio designed waste water treatment facility.

3D designs & Presentation

- ✓ Adverio designed 3D facility to determine the project layout.
- ✓ Adverio presenting the chosen technology, financial data and 3D design at several meetings to the partners and clients in Korea and the Netherlands.

Design to Build

Adverio was responsible for the Concept Engineering, Biological Analyzes and the Feasibility Study. Working with our network partners, technical suppliers and the client.

Site Visit

- Project Definition.
- Analysing existing technology.
- Pictures.
- Visit project site.
- Questionnaire.
- Taking Samples.

Biological Analyses

- Biogas yield.
- Heavy Metals.

Concept Engineering

- Process Flow Diagrams (PFDs).
- Block Flow Diagram.
- Perl. Mass & Energy Balance.
- Updated Project Definition.
- Layout.
- Prel. Equipment List.
- Prel. Project Planning.
- Investment (30% accurate).

Feasibility Study

- Technical evaluation.
- Economical evaluation.
- 3D Layout.

Presentations

- Presentation in the Netherlands.
- Presentation in Korea.
- 3D pictures.

1,5 months

Adverio's expert engineers from the Netherlands and Spain designed the facility in close cooperation with our network partners.

The feasibility study is utilized by the client for contracting and financing purposes.

To find out how Adverio can help develop and realise your ambitions, please contact us.

For a complete overview see: www.adverio.eu

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