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## **Biomethane Also Chosen for Hungarian Bioethanol Production**

Hitachi Zosen Inova's biggest gas upgrading plant to be built in Dunaföldvár

**Irish ClonBio Group Ltd has commissioned Hitachi Zosen Inova BioMethan to build a biomethane plant that will upgrade 5,000 Nm<sup>3</sup>/h of inlet biogas. It is to be constructed in 2022 in Dunaföldvár, Hungary, at Europe's largest grain biorefinery, at ClonBio subsidiary Pannonia Bio Zrt. The upgrading process will use an in-house technology from Hitachi Zosen Inova: amine scrubbing.**

**Dunaföldvár, Hungary.** The renewable gas technologies offered by Hitachi Zosen Inova (HZI) for producing energy from regenerative resources are in great demand. After a successful first half-year with several project orders for anaerobic digestion and upgrading plants, at the beginning of the second half the German subsidiary HZI BioMethan GmbH (HZIB) was awarded the contract for an amine scrubbing gas upgrading installation in Dunaföldvár, Hungary. With an inlet biogas capacity of 5,000 Nm<sup>3</sup>/h, it will replace the current largest reference of 2,000 Nm<sup>3</sup>/h in Germany as HZI's biggest reference project featuring this gas upgrading process. The client for the project is Pannonia Bio Zrt, a company of the ClonBio Group. Commissioning is scheduled for 2022.

### **New Region, New Plant Set-up**

The Dunaföldvár project will be the first gas upgrading facility by HZI in Hungary. Around 90 km south of Budapest, Pannonia Bio Zrt is Europe's largest grain biorefinery for ethanol production and hosts Central Europe's largest operating advanced biofuel production facility. Every year the refinery converts more than a million tonnes of grain into hundreds of thousands of tonnes of various protein feeds and protein concentrates, over 500 million litres of bioethanol, 15,000 tonnes of corn oil and 15,000 tonnes of organic fertilisers, as well as other products.

"Our talented staff completed our advanced biogas facility and brought it online during the COVID-19 pandemic, and we are now ready to take this unique asset to the next level with HZI. At ClonBio, we believe that advanced biomethane is the most practicable advanced biofuel available at scale in Europe, and we believe, because we are seeing it happen, that fermentation technologies like biogas and ethanol present almost unlimited opportunities for circular economy solutions that offer the largest just transition benefits. We are extremely proud that Pannonia Bio already supports well over 5,000 jobs in Hungary," comments Mark Turley, CEO of ClonBio. Starting in 2022 the biogas will be amine scrubbed to convert it into biomethane, a natural gas substitute, and fed into the local gas grid. This renewable energy source will then be available to transport and heating customers in Hungary and beyond who want to switch away from fossil natural gas.

New software has been designed to integrate the gas upgrading system in the fully automated production facility. Jens Becker, Managing Director at HZIB, underscores this step into full automation: "It allows the installation to be controlled completely via the production facility's control centre. This creates interesting possibilities for other refineries."

### **Future Perspectives**

Beyond this, ClonBio plans to maximise material flow recycling. In the upgrading process, the methane contained in the biogas will be separated from other components, especially carbon dioxide (CO<sub>2</sub>). For this reason, in the future sustainable use of CO<sub>2</sub> will be another target for the Dunaföldvár facility. Thanks to a comprehensive renewable gas portfolio and deep know-how in interfaces, HZI can supply an integration solution to support this expansion.

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### Image:

Production site of Pannonia Bio Zrt.jpg; caption: Drone view of Pannonia Bio's production site in Dunaföldvár, where the HZI gas upgrading plant is to produce biomethane from biogas (Picture credits: Pannonia Bio Zrt)

### **About Hitachi Zosen Inova**

Zurich-based Hitachi Zosen Inova (HZI) is a global leader in energy from waste (EfW) and renewable gas, operating as part of the Hitachi Zosen Corporation Group. HZI acts as an engineering, procurement and construction (EPC) contractor and project developer, delivering complete turnkey plants and system solutions for thermal and biological EfW recovery. Its solutions are based on efficient and environmentally sound technology, are thoroughly tested, and can be flexibly adapted to customer requirements. HZI's Service Group combines its own research and development with comprehensive manufacturing and erection capabilities to provide support throughout the entire plant life cycle.

HZI works for customers ranging from experienced waste management companies to up-and-coming partners in new markets worldwide. Its innovative and reliable waste, flue gas treatment, gas upgrading and power-to-gas solutions have been part of more than 700 EfW and biogas reference projects delivered since 1933.

To find out more about HZI, please visit [www.hz-inova.com](http://www.hz-inova.com).

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### **About Pannonia Bio Zrt**

Pannonia Bio operates a biorefinery in Tolna County, Hungary. The plant uses state-of-the-art production processes and is a nursery for development of new bio-based technologies. From its beginnings as a bioethanol producer in 2012, the refinery has almost tripled in size and developed into a multiproduct facility. Today, nutrition, health, biochemical and fuel bioproducts are manufactured as alternatives to fossil materials.

Pannonia Bio is a subsidiary of ClonBio Group Limited (ClonBio), an Irish agribusiness headquartered in Dublin, Ireland.

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