

Media release, 4 May 2022

## Inauguration of Switzerland's First Industrial Power to Gas Plant

The Power to Gas plant with biological methanation in Dietikon, Zurich, has been producing green gas from wastewater and waste since March this year.

***The inauguration of the first Power to Gas plant based on biological methanation in Europe is not only a milestone for its owner and operator Limeco, but also for HZI Schmack, from whom the innovative technology originates. The green gas produced can save the CO<sub>2</sub> emissions of around 2,000 households.***

**Dietikon, April 2022** – On 28 and 29 April, the ceremonial inauguration of Europe's first industrial Power to Gas (PtG) plant based on biological methanation took place in Dietikon, Zurich. The milestone project is located on the site of the Limmattaler Regiowerk Limeco utility, which is also the owner and operator of the plant. The builder and technology supplier is the Bavarian company Hitachi Zosen Inova Schmack GmbH (HZI Schmack), a subsidiary of Hitachi Zosen Inova AG.

Representatives from politics and the industry were invited to attend the festively framed event and listen to various technical presentations and ceremonial speeches on site. One highlight was undoubtedly the guided tour of the plant, which gave visitors unique insights into this milestone project.

### **CO<sub>2</sub>-Neutral Methane Gas from Power to Gas Process**

Regiowerk Limeco initiated and realised this beacon project of the modern energy industry together with eight Swiss energy suppliers and the municipal utility alliance Swisspower. The location was of central importance, as the existing waste treatment plant (WTP) and wastewater treatment plant (WWTP) on the Limeco site provide the elementary ingredients for the PtG process: electricity and sewage gas.

In the new Power to Gas plant, renewable electricity from the WTP is used to split water into oxygen (O<sub>2</sub>) and hydrogen (H<sub>2</sub>) by means of electrolysis. In a second process step, this hydrogen is fed into HZI Schmack's methanation reactor together with sewage gas from the WWTP. In the BiON® process developed in-house, microorganisms in this bioreactor convert hydrogen and the CO<sub>2</sub> contained in the sewage gas into methane (CH<sub>4</sub>) under anaerobic conditions. The methane is then purified and can be fed into the local gas grid as a CO<sub>2</sub>-neutral substitute for natural gas. The renewable gas from the Limeco PtG plant can save the CO<sub>2</sub> emissions of around 2,000 households.

### **Contributing to the Swiss Energy Transition with Power to Gas**

As part of its Energy Strategy 2050, the Swiss government plans to replace nuclear power with renewable energy resources such as solar, hydro and wind power. This regenerative electricity is subject to greater seasonal and temporal fluctuations and cannot be stored. Thanks to Power to Gas technology, it is possible to convert seasonal and temporal surpluses from this electricity production into gas and thus make it storable and transportable. This makes Power to Gas technology an important factor in the energy transition while providing energy independence and security. With the project in Dietikon, Limeco is leading the way as a pioneer, while all parties involved in the project are united in the conviction that this concept will set a precedent in the Swiss energy market.

### **About Hitachi Zosen Inova**

Zurich-based green-tech company Hitachi Zosen Inova (HZI) is a global leader in solutions for energy transition and circular economy including Energy from Waste (EfW) and Renewable Gas (RG), operating as part of the Hitachi Zosen Corporation Group. HZI acts as a project developer, technology supplier and engineering, procurement and construction (EPC) contractor delivering complete turnkey plants and system solutions for thermal and biological waste recovery. Its solutions are based on efficient and environmentally sound technologies, are thoroughly tested, and can be flexibly adapted to customer requirements. HZI's Service Solutions Group combines its own research and development with comprehensive manufacturing and erection capabilities to provide support throughout a plant's entire plant cycle. HZI works for customers ranging from established waste management companies to up-and-coming partners in new markets. Its innovative and reliable solutions have been part of more than 1,600 reference projects worldwide.

Find out more about HZI at [www.hz-inova.com](http://www.hz-inova.com).

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### **About Limeco**

Limeco is the builder and operator of the Power to Gas plant. In its capacity as a regional utility in Dietikon near Zurich, Limeco supplies the Limmat valley with climate-friendly energy. To this end, it operates a large district heating network, which will be greatly expanded over the next few years, as well as a wastewater treatment plant and a waste recycling plant.

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### **About Swisspower AG**

Swisspower, the strategic alliance of 21 Swiss municipal utilities and regional utility companies, is a co-initiator and advisor in the realisation of the showcase project. It is in line with the Masterplan 2050, the alliance partners' joint vision for a completely renewable energy supply without CO<sub>2</sub> emissions.

### **About the Cooperation Partners**

Eight Swiss energy suppliers are financing the Power to Gas plant by buying the certificates for the green gas produced and thus supplying their customers with synthetic renewable gas from Switzerland. The cooperation partners are Eniwa AG, Energie Zürichsee Linth AG, St. Galler Stadtwerke, Energie Wasser Bern, Gas- und Wasserversorgung Dietikon, Gas- und Wasserversorgung Schlieren, SWL Energie AG and Industrielle Betriebe Interlaken.

**Caption 1: Installation of the bioreactor by HZI Schmack.**

**Caption 2: New Power to Gas plant on the Limeco site in Dietikon, Zurich.**