

PRESS RELEASE

Hitachi & ASCO partner to supply CO₂ Liquefaction Plant for innovative swiss energy project

CO₂ Energie AG, a subsidiary of Swiss energy company "Regionalwerke Baden" and "Recycling Energie AG" has joined forces with Hitachi Zosen Inova and ASCO Carbon Dioxide LTD. to develop a state-of-the-art installation for the separation and liquefaction of renewable carbon dioxide at an existing biogas plant. This groundbreaking initiative aims to make renewable by-products readily available for industrial applications, reducing the reliance on fossil carbon dioxide. By doing so, it takes a significant stride towards global climate protection and decarbonization efforts.

"This project brings together environmental and economic benefits," says Ralph Spring, CEO of ASCO Carbon Dioxide. "It's a "first of its kind" project in Switzerland and we hope, that it will be used as best case example for future biogas or waste-to-power plants", Spring adds. The existing biogas plant has been producing biogas, which is then upgraded into biomethane for the regional natural gas grid. However, with the new installation, CO₂ that previously was released to the atmosphere, now will be captured and undergoes several steps of filtration and dehydration under high pressure. The plant has a processing capacity of 4,000 tons per year, promoting efficient carbon dioxide utilization and contributing to the substitution of fossil CO₂.

In addition to reducing CO₂ emissions, Recycling Energie AG and RWB have successfully collaborated in Nesselbach. Recycling Energie AG produces raw gas, refined by RWB, and fed into the gas grid as biogas. Previously, the captured CO₂ was released into the atmosphere, but now it will be diverted to the new plant for processing into liquid carbon dioxide. "With the new plant, we will be able to capture around 90 percent of the CO₂ produced, which amounts to up to 3,000 tons of CO₂ annually," stated a spokesperson. The new purification process will also eliminate residual methane, ensuring minimal environmental impact and maximizing sustainability.

The liquid CO₂ is stored in large tanks at place before it is collected by Messer Schweiz AG, an industrial gases company based in Lenzburg, and sold on the national CO₂ market. The applications of carbon dioxide range from industrial processes, medical technology, to its inclusion in various beverages within the food industry as carbonic acid. The new plant's contributions eliminate the need for additional fossil carbon dioxide production or imports from abroad.

The collaboration between Hitachi Zosen Inova and ASCO Carbon Dioxide AG represents a significant milestone in the pursuit of sustainable energy solutions. This pioneering project underscores the commitment to a greener, more sustainable future of both companies. Further joint projects for Carbon Capture Utilization & Storage (CCUS) are already in the pipeline.

About ASCO Carbon Dioxide

Swiss ASCO CARBON DIOXIDE LTD is a worldwide operating company offering complete solutions around CO₂ and dry ice. The range of services goes from CO₂ recovery systems, dry ice production machines, CO₂ bottle filling systems, CO₂ evaporators, ASCOJET dry ice blasting equipment to CO₂ storage tanks, CO₂ dosing systems for water neutralization and various other CO₂ and dry ice equipment. Thanks to this broad product range and more than 130 years of practical experience in the comprehensive CO₂ and dry ice field, the customer benefits from individual, complete CO₂ solutions from a single source.

Since 2007, ASCO has been part of the international industrial gases company Messer Group and is its competence center for CO₂. Through the merger with the German BUSE Gastek GmbH & Co. KG, based in Bad Hönningen, Germany, in 2014, the joint know-how and product portfolio was bundled and significantly expanded, especially in the complex field of CO₂ recovery. In July 2016, the US subsidiary ASCO CARBON DIOXIDE INC (ASCO Inc.) was founded with headquarters in Orange Park, Florida

www.ascoco2.com

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.

www.hz-inova.com

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