

Media Release, 5 July 2023

## CO<sub>2</sub> Liquefaction Facility in Nesselbach Officially Inaugurated

Pioneering climate protection project recycles carbon dioxide from gas upgrading for industrial use

***Yesterday, Regionalwerke AG Baden and Recycling Energie AG celebrated the start of operations of the CO<sub>2</sub> liquefaction facility in Nesselbach, Canton Aargau, with a ceremony and invited guests from politics and business. Hitachi Zosen Inova developed the plant for turnkey delivery on behalf of the operating company CO<sub>2</sub> Energie AG. It is a significant milestone on the road to decarbonising the Swiss energy system.***

**Nesselbach, Switzerland.** Yesterday, Tuesday, saw the official inauguration of the CO<sub>2</sub> liquefaction facility in Nesselbach in the Swiss canton of Aargau. The project is an example of best practices in terms of optimising circularity and maximising the recycling of resources. Carbon dioxide (CO<sub>2</sub>) from the upgrading of biogas that was previously released into the environment is now used in industrial applications, for example in processes in the pharmaceutical, medical and food industries.

### Existing Concept Evolved

The Recycling Energie AG site includes a biogas plant whose raw gas has already been refined by Regionalwerke AG Baden (RWB) since 2018 to produce biomethane, a natural gas substitute, which can be fed into the grid. The process involves separating carbon dioxide and methane, the two main components of the raw biogas. The biomethane is generally fed into the existing grid infrastructure for distributed use in heat and power generation. The CO<sub>2</sub> bound in the biogenic substrates and separated in the gas treatment process, on the other hand, is usually released into the atmosphere.

“By expanding the plant, a very complex undertaking from a technical point of view, CO<sub>2</sub> Energie now makes it possible to use this by-product,” explained Philippe Lehman, CEO of CO<sub>2</sub> Energie AG, at the opening ceremony. “It’s fed from the gas upgrading plant to the liquefaction unit where it is purified, filtered and dehydrated in several sub-steps. The gas is liquefied by cooling it to minus 24 degrees Celsius. This allows it to be compressed into tanks for storage and transport.” The CO<sub>2</sub> needed in numerous applications can thus be provided from renewable sources. This reduces the use of carbon dioxide of fossil origin and promotes decarbonisation.

### Effective Project Partnership

CO<sub>2</sub> Energie AG commissioned Hitachi Zosen Inova to deliver this project at the end of 2021. Thanks to an extensive portfolio of green-gas-related technologies within the group, the green tech company was an accomplished project partner with the ability to coordinate all the work involved in the process. “We’re delighted to be able to celebrate the unveiling of this pioneering climate protection project with our client today,” said Dr Benoît Boulinguez, Managing Director of one of the German HZI companies in charge of developing and producing the CO<sub>2</sub> liquefaction facility. “Hopefully concepts of this kind will set a precedent and drive decarbonisation forward.” The plant, which is of modular container construction with two scrubbing towers, almost completely recycles the carbon dioxide produced: up to 3,000 tonnes per year. It was manufactured at the HZI site in Zeven, northern Germany, where most of HZI’s gas upgrading and liquefaction teams work.

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### Attachment

CO<sub>2</sub> Liquefaction Plant Nesselbach.jpg: Caption: Pioneering climate protection project: The CO<sub>2</sub> liquefaction plant in Nesselbach, Switzerland (Picture credits: Regionalwerke AG Baden)

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

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