

## Air Liquide Engineering & Construction supports decarbonization of Zeeland Refinery

**Air Liquide Engineering & Construction has signed a contract with Zeeland Refinery, a joint venture between TotalEnergies and Lukoil, to provide a carbon capture and liquefaction solution in the Netherlands. Cryocap™ FG is a unique solution that enables to capture more than 90% of the emissions from the hydrogen production and will contribute to the decarbonisation of the Vlissingen site, by capturing more than 800,000 tonnes of CO<sub>2</sub> per year.**

As part of the agreement, Air Liquide will provide the License, Process Design Package and technical services for a Cryocap™ FG (Flue Gas) plant that will capture more than 90% of the emissions on the two Vlissingen site's existing hydrogen production units and will have the capacity to liquefy 2,400 tonnes of CO<sub>2</sub> per day. As part of its decarbonisation project, Zeeland refinery will thus be able to reduce its CO<sub>2</sub> emissions on the Vlissingen site by more than 800,000 tons per year. The pure and liquefied carbon dioxide will then be transported for storage in the Dutch North Sea.

Cryocap™ FG is a new unique solvent free technology solution developed by Air Liquide. It allows the capture and liquefaction of carbon dioxide contained in concentrated flue gases thanks to a combination of Adsorption and Cryogenics technologies. As it uses electricity rather than thermal energy, Cryocap™ products can run on renewable energy to further reduce the environmental footprint of the sites equipped with this technology.

Air Liquide Engineering & Construction brings to this project an industry leading experience in the development and operation of Carbon Dioxide Capture & Liquefaction units, with proven reference. Its Cryocap™ unit in Port-Jérôme, France, has been in successful operation for more than 5 years.

This contract is an illustration of Air Liquide's commitment to making a meaningful difference and to building a sustainable future through the abatement of CO<sub>2</sub> emissions by providing its customers with environmentally-friendly technologies and applications.

**David Maloney**, Group Vice President and Chairman of Air Liquide Engineering & Construction stated: ***"At Air Liquide, we are committed to making a difference through the abatement of CO<sub>2</sub> emissions for our own production facilities and for our customers. We are pleased to support the Zeeland Refinery project with our innovative carbon capture technologies that will contribute to decarbonisation of the site."***

**Nathalie De Muynck**, General Manager of Zeeland Refinery stated: ***"Zeeland Refinery is proud to be one of the first movers in industry to take a major step in the field of CO<sub>2</sub> emission reduction by applying carbon capture and storage. By integrating the innovative Air Liquide technology into the existing refinery scheme, Zeeland Refinery will strengthen its position in the low carbon future that lies ahead of us."***

### **Air Liquide Engineering and Construction**

Air Liquide Engineering & Construction builds Air Liquide Group production units (mainly air gas separation and low carbon hydrogen production units) and provides external customers with efficient, sustainable, customized technology and process solutions. Air Liquide Engineering & Construction's core expertise in industrial gases, energy conversion and gas purification, enables customers to optimize natural resources. This business unit covers the entire project life-cycle: license engineering services / proprietary equipment, high-end engineering & design capabilities, project management & execution services. As a technology partner, customers benefit from our research and development to contribute to energy transition.

## CONTACTS

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A world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 78 countries with approximately 64,500 employees and serves more than 3.8 million customers and patients. Oxygen, nitrogen and hydrogen are essential small molecules for life, matter and energy. They embody Air Liquide's scientific territory and have been at the core of the company's activities since its creation in 1902.

Air Liquide's ambition is to be a leader in its industry, deliver long term performance and contribute to sustainability - with a strong commitment to climate change and energy transition at the heart of its strategy. The company's customer-centric transformation strategy aims at profitable, regular and responsible growth over the long term. It relies on operational excellence, selective investments, open innovation and a network organization implemented by the Group worldwide. Through the commitment and inventiveness of its people, Air Liquide leverages energy and environment transition, changes in healthcare and digitization, and delivers greater value to all its stakeholders.

Air Liquide's revenue amounted to more than 20 billion euros in 2020. Air Liquide is listed on the Euronext Paris stock exchange (compartment A) and belongs to the CAC 40, EURO STOXX 50 and FTSE4Good indexes.