# **Press Release**



# ADNOC and Fertiglobe to Pilot First-of-its-Kind Cost Effective Modular Carbon Capture Technology

**Abu Dhabi, UAE – 03 October 2023:** ADNOC and Fertiglobe, the strategic partnership between ADNOC and OCI Global, today announced the pilot deployment of the world's first cost-effective modular CycloneCC carbon capture unit at Fertiglobe's 100% owned nitrogen fertilizer plant in the Al Ruwais Industrial Complex, Abu Dhabi, UAE. The CycloneCC technology, which has been developed by Carbon Clean, is designed to improve the economics of point source carbon capture within industrial facilities.

Traditional point source carbon capture technology relies on feeding gas through large absorption and stripping towers where solvent and heat are used to separate, capture and compress CO<sub>2</sub>. The process is capital, time, and energy intensive, with projects typically taking years to build. Carbon Clean's CycloneCC unit uses rotating packed bed technology to allow for prefabricated modular carbon capture units half the size of conventional carbon capture units.

The carbon dioxide captured using the CycloneCC unit will complement an existing ADNOC project to sequester CO<sub>2</sub> within Abu Dhabi's onshore carbonate aquifers. Successful piloting of the technology also holds the potential for the broader deployment of CycloneCC carbon capture units across ADNOC and Fertiglobe's operations.

**Sophie Hildebrand, ADNOC Chief Technology Officer, said:** "Across ADNOC, we are exploring every opportunity to decarbonize our operations and leverage technology and partnerships as part of our journey to Net Zero by 2045. Developing and deploying cost-effective carbon capture technologies is critical to achieving our annual target of 10 million tonnes of carbon capture, utilization and storage capacity by 2030."

Today's announcement supports ADNOC's recent decision to double its carbon capture capacity to 10 million tonnes per annum (mtpa) of carbon dioxide (CO<sub>2</sub>). As part of its wider carbon management strategy, ADNOC aims to create a unique platform that connects all the sources of emissions and sequestration sites to accelerate the delivery of ADNOC and the UAE's decarbonization goals. It builds on ADNOC's recent final investment decision to develop its pioneering 1.5 mtpa Habshan carbon capture, utilization and storage (CCUS) project.

Since 2016, ADNOC has operated Al Reyadah, an 800,000 tonne per year carbon capture, utilization and storage facility in Abu Dhabi. The company is also implementing several innovative, technology projects, including CO<sub>2</sub> mineralization and full carbon sequestration in saline aquifers.

The deployment of the CycloneCC carbon capture unit is one of a number of projects Fertiglobe is exploring as part of its commitment to reducing the carbon footprint of its operations and meeting the increasing demand for low-carbon hydrogen and ammonia.

Ahmed El-Hoshy, CEO of Fertiglobe, said: "We take the climate challenge very seriously and believe that the carbon capture technology will play a significant role in the transition to a more sustainable future. We are pleased that ADNOC, a pioneer in carbon capture and storage in the Middle East, has selected Carbon Clean's innovative and proprietary carbon capture technology for deployment at our nitrogen fertilizer plant in Ruwais, and view this partnership as a further step towards achieving the UAE's decarbonization and net zero ambitions."

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Carbon Clean has over a decade of experience in designing, building and operating industrial carbon capture systems for hard-to-abate industries, with over 85 active patent assets covering more than 30 countries. Its CycloneCC technology was recognized as the Clean Energy Technology Innovation of the Year at Monday's ADIPEC Awards ceremony.

Aniruddha Sharma, Chair and CEO of Carbon Clean, said: "This project is hugely significant given it's the first industrial deployment of CycloneCC technology anywhere in the world. We are moving a step closer to achieving full commercialization of this modular solution which will play a vital role in decarbonizing heavy industries and achieving net-zero targets. I'm especially pleased to be working alongside ADNOC, which is at the forefront of efforts to develop climate-critical sectors such as CCUS."

The pilot deployment of Carbon Clean's CycloneCC carbon capture unit will commence next month. Successful piloting of the technology will allow for the deployment of larger CycloneCC carbon capture units, currently being manufactured in the UAE, across facilities operated by ADNOC Gas and other group companies.

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# **About Fertiglobe:**

Fertiglobe is the world's largest seaborne exporter of urea and ammonia combined, and an early mover in sustainable ammonia. Fertiglobe's production capacity comprises of 6.6 million tons of urea and merchant ammonia, produced at four subsidiaries in the UAE, Egypt and Algeria, making it the largest producer of nitrogen fertilizers in the Middle East and North Africa (MENA), and benefits from direct access to six key ports and distribution hubs on the Mediterranean Sea, Red Sea, and the Arab Gulf. Headquartered in Abu Dhabi and incorporated in Abu Dhabi Global Market (ADGM), Fertiglobe employs more than 2,700 employees and was formed as a strategic partnership between OCI Global ("OCI") and ADNOC ("ADNOC"). Fertiglobe is listed on the Abu Dhabi Securities Exchange ("ADX") under the symbol "FERTIGLB" and ISIN "AEF000901015. To find out more, visit:www.fertiglobe.com.

#### **About ADNOC:**

ADNOC is a leading diversified energy and petrochemicals group wholly owned by the Emirate of Abu Dhabi. ADNOC's objective is to maximize the value of the Emirate's vast hydrocarbon reserves through responsible and sustainable exploration and production to support the United Arab Emirates' economic growth and diversification. To find out more, visit: www.adnoc.ae.

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