

Media Release:

ADNOC Gas Explores Groundbreaking Technology That Turns Methane into Graphene and Hydrogen

ADNOC Gas, Baker Hughes, and Levidian partner on world-first deployment of unique carbon capture technology at Habshan site

Technology has the capacity to produce 1 tonne per annum of Graphene and Hydrogen with scope to hit 15 tonnes from future installations

Harnessing AI and digital twins to drive graphene quality, performance, and next-generation applications

Abu Dhabi, UAE – January 16, 2025: ADNOC Gas plc and its subsidiaries (together referred to as “ADNOC Gas” or the “Company”) (ADX symbol: ADNOCGAS / ISIN: AEE01195A234), a world-class integrated gas processing company, in partnership with Baker Hughes, an energy technology company, has successfully installed British climate technology firm Levidian’s patented LOOP technology at the Habshan Gas Processing Plant.

This marks the first-ever deployment of the technology at an operational gas processing site. Carbon will be captured from methane, the main constituent of natural gas, and transformed into graphene, a material set to shape the future of multiple industrial applications.

The LOOP unit is capable of producing more than 1 tonne per annum (tpa) of graphene and 1 tpa of hydrogen, making it a dual-purpose innovation aligned with global energy transition goals. Future industrial-scale installations are expected to deliver 15 tpa.

Mohamed Al Hashemi, Chief Operations Officer of ADNOC Gas, said: "The deployment of LOOP technology is a significant milestone for ADNOC Gas. By transforming methane into valuable graphene and clean hydrogen, we are unlocking new value from natural gas, driving

decarbonization and supporting the UAE's industrial growth and climate ambitions. This project reflects our dedication to shaping a more sustainable energy future while delivering tangible benefits for the industries we serve."

Data collected during the pilot will be used to refine the ongoing development of AI modelling and digital twins to minimize energy consumption and maximize graphene output from future installations as part of Levidian's growing fleet of LOOP units.

"This project demonstrates once more how the collaboration between Baker Hughes and ADNOC Gas unlocks the potential of new decarbonization technologies," said Alessandro Bresciani, senior vice president Climate Technology Solutions at Baker Hughes. "Bringing innovation from startups and research labs into the reality of complex industrial sites requires technical skills and the highest level of collaboration and focus on health, safety and environment. We are delighted to have brought Levidian's technology into ADNOC Gas' Habshan plant, as part of our company's long-term focus in bringing to market and scaling up innovative solutions for our customers."

John Hartley, CEO of Levidian, commented: "We're seeing huge appetite within the market for our graphene and are excited to be working with Baker Hughes and ADNOC to unlock a new source of this super-material, which will help establish Levidian as one of the world's largest producers of graphene that is less carbon intensive, more affordable and of a consistently higher quality than anything available on the market today."

The graphene produced at the Habshan complex will be evaluated and utilized by ADNOC's Technology team to explore possible applications. Graphene has the potential to be used across industries from enhancing the performance of electric vehicle batteries and solar panels to creating stronger, more durable materials such as concrete, tires, and polymer pipes.

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Notes to Editors

- Levidian has been awarded Verified Graphene Producer status from The Graphene Council
- The Graphene Council was founded in 2013 and serves the global community of engineers, scientists and R&D professionals with an interest in graphene and related 2D advanced materials. Currently, the Graphene Council is the largest community in the world for graphene researchers, academics, producers, developers, investors,

nanotechnologists, regulatory agencies, research institutes, material science specialists and even the public.

- The Habshan complex, one of the world's largest gas processing plants, processes around 6 billion standard cubic feet (6.1 bscfd) of gas per day, supplying natural gas to utilities and industrial customers across the UAE, including water desalination and steel.

About ADNOC Gas

ADNOC Gas which refers to ADNOC Gas Plc and its subsidiaries (ADX: ADNOCGAS), listed on the ADX (ADX symbol: "ADNOCGAS" / ISIN: "AEE01195A234"), is a world-class, large-scale integrated gas processing company operating across the gas value chain, from receipt of feedstock from ADNOC through large, long-life operations for gas processing and fractionation to the sale of products to domestic and international customers. ADNOC Gas supplies approximately 60% of the UAE's sales gas needs and supplies end-customers in over twenty countries. Visit us at www.adnogas.ae

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