



Dubai Graphene Energy Storage Project

How is graphene collected?

Graphene is collected as part of Levidian's Loop system, which splits methane into atoms of hydrogen and carbon. Photo: Levidian Adnoc Gas, in partnership with Baker Hughes, is to use technology at its Habshan Gas Processing Plant that converts methane from natural gas into graphene and hydrogen.

Why should we transform methane into graphene & clean hydrogen?

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.

How much graphene can a gas loop produce a year?

It is the first-ever use of the technology at an operational gas processing site, Adnoc Gas said. The Loop unit can generate more than one tonne per year (tpa) of graphene and the same for hydrogen, with future large-scale installations projected to produce up to 15 tpa.

Can graphene be used in ADNOC technology?

The graphene produced at the Habshan complex will be evaluated and utilized by ADNOC's Technology team to explore possible applications.

Global energy storage capacity was estimated to have reached 36,735MW by the end of 2022 and is forecasted to grow to 353,880MW by 2030. The UAE had 118MW of capacity in 2022 ...

In the field of energy storage graphene technology has become a major technology that promises unbeatable performance, durability, and sustainability. As demand for renewable energy ...

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UAE's Dana Gas to transform flare gas into graphene and hydrogen with Levidian UAE's energy company Dana Gas has agreed to invest in a decarbonisation project in partnership with ...

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The energy storage sector in the Middle East is on the cusp of major change, driven by advances in next-generation technologies and strategic partnerships. At the heart of this ...



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ABU DHABI, January 16, 2025 - ADNOC and energy technology company Baker Hughes have completed the first-ever deployment of LOOP decarbonisation technology at an operational gas ...

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