

For immediate release

24 July 2023

Haydale Graphene Industries plc

('Haydale' or the 'Group')

Contract Awarded to Develop Graphene Ink-Based Low-Power Radiator Heaters

Haydale, (AIM: HAYD), the global technology solutions company, is pleased to announce its next collaboration with Cadent Ltd ('Cadent') to develop graphene ink-based low-power radiator heaters. The £350,000 three-stage project will run for 12-months and is seeking to develop a tested and validated market-ready product as a cost-effective alternative for Cadent's customers when their gas supply is interrupted.

Following continued success on the low-power, battery operated water heating development announced in February 2022 and July 2023, the aim for the latest project is to incorporate the same graphene-ink based technology into different designs to deliver bespoke solutions for a wide range of customer requirements.

Currently, the provision of fan heaters or oil filled radiators to Priority Services Register (PSR) customers, or those in a vulnerable situation without a gas supply, can be expensive and challenging, particularly for those in ill health, elderly or disabled customers. Therefore, Cadent is looking for a next generation solution to provide an alternative heat source that is easy to manage and ensures the customer experiences no, or minimal, disruption in their day to day lives. This development will create a low power alternative radiator heating solution, it will resemble the look of a standard radiator, so it aesthetically fits in to the home environment.

Development of graphene-based, high conductivity inks and coatings that can be applied to surfaces have the potential to provide even heating across large areas with a very thin profile. This technology is made possible by Haydale's patented HDPlas® process, which promotes efficient dispersion of nanomaterials and allows the surface chemistry to be altered to improve the physical and electrical properties.

This project will be completed over three stages, Haydale will provide its time and expertise and work with Cadent to develop the concept, product specification and design that will integrate with Haydale's printed graphene heater panels to create a tested and validated solution.

Keith Broadbent, Haydale CEO, said: "We look forward to our continued collaboration with Cadent on the use of Haydale's functionalised inks in the energy supply market. Our next generation graphene-based technology has already demonstrated value with the low-power water heater development. This latest innovation aligns with Cadent's commitment to supporting its customers in vulnerable situations to make them feel safer in an off-gas situation and be able to still live independently in their home."

Mark Pritchard, Cadent Innovation Specialist, added:

"When a gas supply is interrupted, it can be quite concerning for customers and so our teams work extremely hard to repair any issues as quickly and safely as possible. We are looking forward to once again working alongside Haydale on this innovative project to find an alternative heat source that is easy to manage and ensures customers experience minimal disruption in the event of a loss of gas. Ensuring customers remain safe and warm in their homes is always our top priority and it's particularly important that those in the most vulnerable situations, are able to heat their homes to the optimum temperature, allowing them to stay warm and live independently."

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For further information:

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Notes to Editors

Haydale is a global technologies and materials group that facilitates the integration of graphene and other nanomaterials into the next generation of commercial technologies and industrial materials. With expertise in graphene, silicon carbide and other nanomaterials, Haydale can deliver improvements in electrical, thermal, and mechanical properties, as well as toughness through its state-of-the-art functionalisation. Haydale has granted patents for its technologies in Europe, USA, Australia, Japan, and China and operates from five sites in the UK, USA, and the Far East.

For more information please visit: www.haydale.com

LinkedIn: Haydale-ltd

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About Cadent

Cadent is the UK's largest gas distribution network with a 200-year legacy. We are in a unique position to build on strong foundations whilst encouraging the curiosity to think differently and the courage to embrace change. Day to day we continue to operate, maintain and innovate the UK's largest gas network, transporting gas safely and protecting people in an emergency. Our skilled engineers and specialists remain committed to the communities we serve, working day and night to ensure gas reaches 11 million homes from Cumbria to North London and the Welsh borders to East Anglia, to keep your energy flowing.

Future of Gas: Here at Cadent we support the Government's plans to reach Net Zero by 2050. That means we're backing the introduction of hydrogen as a low carbon alternative to natural gas for the future. We know people love the controllability of gas and, with our network already in place, it makes sense to switch to the lower carbon alternative offered by hydrogen, which we believe can keep homes and businesses warm for generations to come.

Cadent manages the national gas emergency service free phone line on behalf of the gas industry - 0800 111 999*

Cadent Gas Ltd is owned by a consortium of global investors.

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