Nuada Pilots its Next-Generation Carbon Capture Technology in Waste-to-Energy

Nuada has been awarded a £666,525 grant from the Department for Energy Security and Net Zero CCUS Innovation 2.0 programme to advance carbon capture in WtE.

Nuada is poised to help WtE industry decarbonisation

BELFAST, UNITED KINGDOM, June 29, 2023 /EINPresswire.com/ -- Carbon capture company, Nuada, announces the launch of a £1m project in collaboration with the Translational Energy Research Centre (TERC), a national pilot-testing research facility at the University of Sheffield. The project is funded by the £20 million Carbon Capture, Usage and Storage (CCUS) Innovation 2.0 programme which aims to accelerate the deployment of next-generation CCUS technology in the UK, as part of the £1 billion Net Zero Innovation Portfolio (NZIP) from the Department of Energy Security and Net Zero (DESNZ).

Nuada has developed ultra-energy efficient CO2 filtration machines for point-source carbon capture by combining advanced solid sorbents called MOFs with mature vacuum swing technology. This combination represents a step change in carbon capture innovation and yields a “heatless” and “solvent-free” carbon capture process that slashes the associated energy penalty and cost of capture.

In this project, Nuada will pilot its advanced capture technology at TERC’s state-of-the-art CCUS testing facilities to showcase its unmatched CO2 removal efficiency from waste-to-energy (WtE) real flue gas streams. The WtE sector in the UK currently contributes a significant portion of CO2 emissions, and without carbon capture implementation, it is expected to account for 15% of total UK CO2 emissions by 2030.

Dr. Conor Hamill, co-CEO of Nuada, said: “We have identified the WtE industry as a critical sector to decarbonise through our technology. Current amine solvent solutions present high parasitic loads, complex process integration, and operational challenges. Our breakthrough innovation overcomes these deployment barriers and provides the industry with the much-needed next-generation solution to achieve Net Zero."

Dr. Jose Casaban, co-CEO of Nuada, said: “This project marks an exhilarating phase for Nuada, as it follows our imminent pilot trials in the cement industry this autumn. The pilot testing at TERC will prove the exceptional capture performance and the game-changing energy benefits of our technology within the WTE industry. We are delighted to partner with TERC, a world-class CCUS test centre, to showcase Nuada’s technology applicability in most point sources.”

Prof. Mohamed Pourkashanian, Managing Director of the TERC, said: “We are thrilled to be involved in this truly innovative carbon capture project and look forward to working with Nuada. The technology available at the TERC is really at the cutting edge of the low-carbon solutions we have available and using it in projects such as this means we can help to drive forward the availability of cost-effective, clean energy generation solutions, which is much-needed if we are to meet the net-zero goals in UK and globally.”

Minister for Energy Security and Net Zero Graham Stuart said: “Whether it’s the first meal of the day or a night cap, the great manufacturers of our country are striving to cut their carbon emissions and their energy bills – and in turn, support our efforts to boost our energy security. Our investment of over £80 million will help them to go further and faster, using the latest science, technologies, and new energy sources to cut ties with fossil fuels and futureproof their industries.”

About Nuada

Nuada is a pure-play carbon capture company that is poised to decarbonise heavy industries through its next-generation point-source capture technology. The company builds energy-efficient filtration machines that capture CO2 from industrial off-gases, empowering emitters in hard-to-abate sectors to reduce their carbon footprint with minimum impact on their bottom line.

About Translational Energy Research Centre (TERC)

The Translational Energy Research Centre (TERC) at the University of Sheffield is one of the largest and best-equipped zero-carbon energy, hydrogen, bioenergy, CCUS, and sustainable aviation fuels research and development facilities in Europe. The unique pilot-scale testing centre supports technology development by providing researchers and industry pioneers the opportunity to work with state-of-the-art equipment and world-leading academics.

About Department for Energy Security and Net Zero

The Department for Energy Security and Net Zero will provide dedicated leadership focused on delivering security of energy supply, ensuring properly functioning markets, greater energy efficiency and seizing the opportunities of net zero to lead the world in new green industries.

The funding from the CCUS Innovation 2.0 programme comes from the department's £1 billion Net Zero Innovation Portfolio which provides funding for low-carbon technologies and systems and aims to decrease the costs of decarbonisation helping enable the UK to end its contribution to climate change.

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