

Viridor invests £2m in innovation project to create low carbon transport fuels from landfill gas

Viridor has signed an agreement to work with Dutch company CarbonOrO to deliver a global first – a gas clean-up system which transforms landfill gas into transport fuels in a process which also allows for successful capture of CO₂.

Viridor MD Phil Piddington said the project, a £2m innovation investment, would begin with a plant installation at the company's Dunbar Landfill site early next year, with commissioning taking place in summer 2020.

Mr Piddington said: "Viridor is committed to working with companies like CarbonOrO to develop sustainable solutions for the management of landfill gas. With the natural life of incentives, such as landfill gas renewable obligation certificates (ROCs), coming to the end in 2026/7, it is essential for our sector to develop new technologies and applications.

"CarbonOrO is a company committed to mitigating climate change by using landfill gas as a source of renewable energy. This is entirely in keeping with Viridor's ethos of putting waste to work and creating valuable resources which actively help the UK achieve its environmental, resource and energy efficiency ambitions. Converting landfill gas into transport fuels is exactly the right vehicle for realising these goals.

"We look forward to the Dunbar commercialisation delivering results which will enable us to use CarbonOrO's unique technique across our portfolio of landfill sites. This investment in innovative technology is also an important development for the closed landfill sites but which form part of Viridor's aftercare programme."

CarbonOrO General Manager Pieter Verberne said: "We are very excited about this landmark innovation project which recognises the value of Viridor's Dunbar landfill and CarbonOrO's gas-cleaning process. CarbonOrO welcomes the sustainable and profitable optimising of landfills."

Viridor's Head of Innovation and Technology, Marcus Du Pree Thomas, said the process involved the stripping and low temperature regeneration of carbon dioxide capture and other contaminants from methane content of landfill gas.

Mr Thomas said: "Once the gas has been liberated from landfill, this energy-efficient CO₂-scrubbing process can be used to create a transport fuel with future applications including supply agreements with UK filling stations and the CO₂ successfully captured and harnessed for third party applications such as in agriculture and the chemical/manufacturing industries.

"This is an incredibly efficient process with the methane gas cleaned to fuel grades in a matter of minutes and a landfill site like Dunbar, currently producing over 2,000m³/hr of gas, capable of creating transport fuel which would replace the fossil fuel for over 20,000,000 truck miles per year."

Mr Thomas said this plant alone could generate a carbon saving of nearly 20,000 tonnes a year compared to Diesel for the fully integrated facility.

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He added: “This project is part of a number of industry-leading sustainable innovations that Viridor is working on.”

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