

Press Release

A cleaner future for landfill: Levidian and Tadweer join forces to decarbonise methane emissions in Abu Dhabi

- Partnership between Tadweer and Levidian marks a global first with UK decarbonisation tech to be installed at Abu Dhabi's landfill site.
- Levidian's LOOP to convert waste methane into hydrogen and carbon negative graphene.
- 20% of global methane emissions come from unmanaged waste.
- Partnership expands Levidian's Middle East footprint in breakthrough for UK plc.

Cambridge and Abu Dhabi, 8 December: UK climate leader Levidian and Tadweer (Abu Dhabi Waste Management Company) have today announced an agreement to tackle emissions from one of Abu Dhabi's largest landfill sites.

The companies are working closely on a first-of-its-kind pilot to install Levidian's LOOP technology, which will strip the carbon from gas produced by organic waste and lock it away in high-quality graphene. The device will also produce a hydrogen-rich blend gas that will be used to generate clean electricity on site.

It is estimated that the LOOP device will deliver a reduction in emissions of around 40% while supporting further upstream carbon savings through the addition of graphene to increase the performance of materials such as concrete, batteries and polymers. If successful, the pilot could be scaled up to strip the carbon from an estimated 1.2 billion cubic metres of landfill gas over the next 10 years.

This deal is part of Levidian's expansion into the UAE, which was announced in November.

Eng. Ali Al Dhaheri, Managing Director and CEO of Tadweer, said: "The installation of Levidian's LOOP technology is a critical part of our journey as we work towards our strategic vision for sustainable waste management. In the lead up to COP28, it's more important now than ever for Tadweer to become a global model for a circular economy, alongside partners such as Levidian, as we create the foundations for a sustainable future."

With 20% of global methane emissions coming from landfill waste, the effective management of global waste is set to play a pivotal role in achieving a circular economy.

John Hartley, CEO of Levidian said: "One of the biggest challenges in tackling emissions from landfill sites isn't the technology, it's the cost. The utilisation of Levidian's LOOP technology will allow Tadweer to clean up emissions while creating a revenue stream from the production of hydrogen and graphene that will ensure that the project pays for itself.

"This project is so important because it demonstrates the full circularity of LOOP's technology, whilst tackling one of the hardest to abate sectors globally. We are also delighted to be growing our partnerships in the UAE, as the region becomes ever more vital to reaching net zero worldwide."

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About Levidian

Founded in 2012, Levidian is a British climate tech business whose patented LOOP technology cracks methane into hydrogen and carbon, locking the carbon into high-quality green graphene. Our world-leading R&D Technology Centre in Cambridge also offers consultancy services to companies to aid in the development of graphene-enhanced products for major global industries.

The company is already working to deploy its technology at sites around the world including [United Utilities](#)' site in Manchester where it will be used to decarbonise biogas created within the wastewater treatment process. Luxembourg construction firm [Stugalux](#) will be using Levidian graphene to strengthen their building materials.

Levidian's vision is a decarbonised world powered by hydrogen and built on graphene.

About Tadweer

Tadweer (Abu Dhabi Waste Management Center) was established in 2008 as part of the capital's commitment to conserve natural resources, improve environmental and public health standards and create a more environmentally responsible society. Tadweer strives to preserve natural resources and establish sustainable waste management and pest control systems in the UAE capital.

Tadweer Abu Dhabi has set up 26 treatment facilities and works with 808 service providers.

- Abu Dhabi generates nearly 10 million tonnes of waste per year, 65% of which ends up in landfill.
- At a massive 972km², Tadweer's Hameem Landfill has amassed an estimated 60 million tonnes of accumulated waste since it started operations.
- Landfill gas is a natural byproduct of landfill sites and is composed of roughly 50% methane, a potent greenhouse gas that is 80% more harmful than carbon dioxide and estimated to be responsible for more than a quarter of the global warming we are seeing today.

Notes to editors:

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