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Globus Group makes ambitious sustainability commitment to reach net zero by 2027 with world-first recycling collaboration

4 years ago

As part of its commitment the Group will:

- Ensure all its European-made products launched after 2024 are net zero
- Develop and implement a robust product life cycle management process with more than half of its customers.
- Launch a ground-breaking new scheme in partnership with Heriot Watt University to develop an innovative process to recycle 10kg of plastic PPE waste every hour

Leading international PPE manufacturer Globus Group has announced today that it has committed to reaching net zero carbon emissions by 2027.

As part of its commitment the company will ensure all its European-made products launched after 2024 are net zero and develop and implement a robust product life cycle management process with more than half of its customers.

To support its journey to net zero, Globus has partnered with Heriot Watt University to design and develop a bespoke PPE recycling process.

The soaring quantities of plastic PPE, including respirators and masks, that have been thrown away during the pandemic has been widely criticised as the world strives to reach Net Zero goals.

Since the start of the pandemic, an estimated 8.4m tonnes of plastic waste has been generated from 193 countries [1], the majority of which ends up in landfill or, in some areas, in the ocean.

The new Knowledge Transfer Partnership (KTP) project is set to revolutionise how used plastic PPE is treated to turn the waste into a secondary raw material called pyrolysis oil, which can then be refined into new commercial products like new PPE products or fuels. The project, which aims to create a robust circular economy approach for plastics, will run for two years.

This collaboration underlines Globus Group's commitment to operating as a Greening Company and a proactive contributor to the Paris Agreement Goals.

Since the onset of the Covid-19 pandemic, Globus Group, the biggest British-based PPE manufacturer, has been producing one billion medical masks and 300 million FFP respirators per annum for healthcare Trusts across the UK. The manufacturing process currently results in 7g of waste material per medical mask.

As part of this initiative, the business has implemented innovative sustainable thermal heating technology at its Alpha Solway factory in Golborne, North West England. Developed by TCG, the machine has been designed to heat and compact the plastic polypropylene into large, reusable blocks. These are then collected and processed, providing raw materials, which Globus Group can use to make new PPE products – reducing PPE waste by an estimated 85%.

Globus's new pledges reflect the vision of Group CEO Haraldur Agustsson who said:"Investing tens of millions into accelerating our onshoring plans for UK manufacturing was merely the first step for the Group.

"Placing environmentally green materials, technology, sustainability and recycling projects at the heart of our future strategy and investment is now key to our goals moving forward."

Dr Aimaro Sanna, an assistant professor in chemical and process engineering (EPS) at Heriot-Watt University is an expert in thermochemical conversion of biomass and waste material. He said: "We will be working closely with our commercial partner Globus Group to develop a bespoke process that will be applied to PPE plastic waste that cannot currently be recycled mechanically due to various technological, economic or ecological reasons. As the world strives to reduce its landfill, ocean impact and carbon emissions, this project is a significant step towards addressing the increased waste generated during the global pandemic.

"Initially the research will help to recycle over 100 tonnes of product generated by the manufacturing process every year – the equivalent to 10kg of waste every hour. However, our hope is that this new process will be adopted more widely. Many countries have been unable to process their plastic waste PPE properly. Our ground-breaking research aims to address these challenges providing an exemplar technique for application globally."

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The new scheme launched by Globus Group and Heriot-Watt University will develop an innovative process for cost and energy-efficient recycling and repurposing of this PPE waste.

As part of the initiative, Globus Group has implemented innovative sustainable thermal heating technology at its Alpha Solway factory in Golborne in North West England. Developed by Thermal Compaction Group (TCG), the machine has been designed to heat and compact the plastic polypropylene into large, reusable blocks. These are then collected and processed, providing raw materials which Globus Group can use to make new PPE products – reducing the company's PPE waste by an estimated 85%.

Pete Lee, Head of Quality at Globus Group, added:"As well as reducing our carbon footprint through European manufacturing, we are leading the way by investing in innovative production processes that are designed to reduce the use of single-use plastics. This machine is a fundamental part of our process to re-purpose and utilise waste material to achieve a circular economy.

"At Globus Group, we acknowledge our responsibility to the NHS, supporting it in delivering a 'net zero' sustainable future, and the long-term welfare of future generations. This technology will be a real game changer in the way we tackle our PPE waste."

Jim Berryman, Knowledge Transfer Advisor, Innovate UK KTN commented:"The commitment to provide a circular solution for 100 tonnes of PPE per year is hugely ambitious and is exactly the sort of innovation step we seek to support through our Knowledge Transfer Partnerships. Working in collaboration with the Alpha Solway factory and Heriot-Watt University will see us applying research expertise to address a significant environmental challenge, helping deliver the Globus Group's net zero ambitions."

The Knowledge Transfer Partnership is co-funded by Innovate UK and the Scottish Funding Council.

[1]Magnitude and impact of pandemic-associated plastic waste published in the journal PNAS.

Image credit: Unsplash