

Alternative recycling methods are key for the future of waste management

Loop Industries and Suez have announced plans for an Infinite Loop plastics recycling facility in Europe using technology that can make 100% recycled and constantly recyclable PET plastic.

Temps de lecture : minute

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The Loop technology is designed to make waste plastic perpetually recyclable with no reduction in quality, and the facility will help meet increasing demand for recycled and recyclable raw material from consumer goods and drinks companies. The companies said the planned facility could make 4.2B infinitely recyclable bottles from recycled PET plastic annually, saving 180,000 mt of CO₂. The factory's location will be decided by the middle of 2021.

Why does this matter? The above articles arrives on the heels of Loop announcing it will be partnering with Chemtex Global and Invista Performance Technologies to accelerate the global rollout of its proprietary depolymerising system, which helps produce 100% recycled PET resin and polyester fibre.

Loop has also previously entered into partnerships with multinationals including L'Oreal and PepsiCo to develop sustainable packaging.

The firm's technology breaks down an array of low-value plastic waste into dimethyl terephthalate and monomers, which are then purified before being turned into PET resin or polyester fibre. Crucially, the

company says its process creates a recycled product with no drop off in quality when compared to virgin plastic.

Developing alternative recycling methods will likely be critical in addressing the issue of plastic proliferation. Conventional recycling processes have been found to have their issues, including emissions generated by melting plastics down to be repurposed, and low-quality products being created as a result.

Despite a plethora of corporates committing to utilising recycled plastics – particularly rPET – figures suggest only a small portion of virgin material is repurposed. A report published by Greenpeace in February this year claimed, in the US, only plastic drink bottles are widely recycled. Previous estimates suggest that only about 9% of single-use plastic makes it to the recycling stage.

Additionally, in 2018, China began restricting imports of scrap plastic from other nations often unable to process all their waste domestically. Shortly after, other South-East Asian countries also looked to turn away these shipments.

In July, the World Economic Forum noted such cross-border frictions had prevented plastic recycling occurring at scale. It added, however, that, as of 2021, recyclable plastic waste that is sorted and uncontaminated will be able to be traded freely.

Against this backdrop, Loop's technology will be attractive if it can be increasingly rolled out at scale. The firm is not alone in piloting alternative recycling processes. France's Carbios, for example, uses an enzyme to break down plastic. The firm says it can convert polymers back to their monomer building blocks in a process that takes only 10 hours. This, like Loop's process, would allow for high-quality products to be re-created.



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