

Supporting a circular economy for plastic waste through chemical recycling

Abstract:

Plastics have transformed our way of life, from the clothes we wear to the way we keep our food fresh, to our modes of transport and the technology we use. While it has many considerable benefits, the disposal of plastic waste has become a growing environmental risk. According to the OECD, just 9% of plastic waste is recycled globally, while 50% is landfilled, 22% is mismanaged and 19% is incinerated. Despite increased global efforts to tackle the plastic waste crisis, the scale-up of recycling technologies is still needed to address plastics pollution and decarbonise the plastics supply chain.

Plastic Energy provides a solution to this problem and is paving the way as one of the world leaders in the chemical recycling of waste plastics. Plastic Energy uses its patented TAC™ technology to transform plastic waste that is difficult or unable to be mechanically recycled, such as flexibles and multilayer films, diverting it from landfill and incineration. Recycled oils from its process (called TACOIL™) are used as a replacement for fossil oils, in the production of virgin-quality food-grade plastics, contributing to the circular economy.

With two industrial recycling plants currently in operation in Spain, Plastic Energy has been developing its TAC™ technology and the chemical recycling industry for over 10 years. They have announced multiple projects in Europe, North America and Asia, including projects with SABIC in the Netherlands, SK Geo Centric in South Korea, TotalEnergies in France, and Petronas in Malaysia. With Plastic Energy's value-chain partners, they have moved beyond the proof-of-concept stage to the commercialisation of food-grade packaging made from their TACOIL™.

As the EU sets out ambitious new targets for recycled content, more investment in advanced recycling is needed to propel the sector forward and help the EU deliver on its circular economy ambitions.

