OpenLOOP recycling technology - sustainable and profitable solution to the management of PET/cellulose waste

Fact Sheet

Project Information

OpenLOOP

Grant agreement ID: 190115848

DOI

10.3030/190115848

Funded under

The European Innovation Council (EIC)

Total cost

€ 3 500 045,00

EU contribution

€ 2 450 000,00

Coordinated by

IOS, INSTITUT ZA OKOLJEVARSTVO IN SENZORJE, PROIZVODNJA, TRGOVINA IN STORITVE DOO

Slovenia

Project description

Innovative recycling technology to combat plastic pollution

Plastic pollution is bad for the environment and hinders its ability to adapt to climate change. The EU-funded OpenLOOP project has a solution. It will use a chemical recycling clean technology to effectively degrade polyethylene terephthalate (PET) plastic and cellulose waste, creating valuable feedstock in the process. The technology is comprised of proprietary processing steps, including enzymatic hydrolysis to separate PET and cellulose, neutral hydrolysis to depolymerise PET,
recycled terephthalic acid purification, dehydration to extract 5 hydroxymethylfurfural and levulinic acid, and finally, purification of these compounds. The project aims to develop the technology integrating it into an industrial setting, automating the procedures, validating its effectiveness, engineering process steps for optimal productivity, designing commercial packages, and developing a sustainable supply chain.

**Fields of science**

- engineering and technology
- environmental engineering
- waste management
- waste treatment processes
- recycling
- social sciences
- economics and business
- economics
- production economics
- productivity

**Programme(s)**

- HORIZON.3.1 - The European Innovation Council (EIC)

**Topic(s)**

- HORIZON-EIC-2022-ACCELERATOROPEN-01 - EIC Accelerator Open

**Call for proposal**

- HORIZON-EIC-2022-ACCELERATOR-01

See other projects for this call

**Funding Scheme**

- EIC-ACC - EIC-ACC

**Coordinator**

- IOS, INSTITUT ZA OKOLJEVARSTVO IN SENZORJE, PROIZVODNJA, TRGOVINA IN STORITVE DOO

Net EU contribution
€ 2 450 000,00

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Beloruska ulica 7
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Region
Slovenija > Vzhodna Slovenija > Podravska

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Other funding
€ 1 050 045,00

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Permalink: https://cordis.europa.eu/project/id/190115848

European Union, 2023