European Commission

CHEMICALS

INNOVATION FUND

Deployment of net-zero and innovative technologies

ASTRA PP: Advanced Solvent-based Technology for Recycling in Antwerp, for PolyPropylene

The Innovation Fund is 100% funded by the EU Emissions Trading System

| Project Factsheet

PureCycle's project ASTRA PP will install a polypropylene (PP) recycling facility in the Port of Antwerp-Bruges, in Belgium with a waste purification process for an annual production capacity of 59,000 tonnes of Ultra-Pure Recycled PP (UPR-PP) from a variety of PP-waste streams. The project is expected to reach 85% greenhouse gas emission avoidance relative to conventional fossil-raw-material-based PP production.

The project will deliver the EU's first-of-a-kind PP-waste purification facility based on a proprietary dissolution recycling process that removes colour, odour, and other contaminants from plastic waste to transform it into UPR-PP, with performance and purity comparable to conventional PP. With the PureCycle process, PP-waste becomes a renewable resource that can be used multiple times, establishing a circular economy within the plastics sector. PP is a widely used plastic with many applications, including packaging, automotive, construction, medical, electrical, electronic equipment etc. By recycling PP

COORDINATOR
PURECYCLE TECHNOLOGIES INC.

LOCATION
Belgium

CATEGORY
Energy intensive industries (EII)

SECTOR
Chemicals

AMOUNT OF INNOVATION FUND GRANT
EUR 40,000,000

EXPECTED GHG EMISSIONS AVOIDANCE
2,404,267 tonnes CO2 equivalent

STARTING DATE
01 May, 2025

FINANCIAL CLOSE DATE
31 July, 2027

ENTRY INTO OPERATION DATE
30 June, 2029

CALL NAME
InnovFund-2024-NZT

** Calculated vs. the 2021-2025 ETS benchmark of 6.84 tCO2e/tH2, not taking into account additional carbon abatement due to substitution effects in the H2 end use application, i.e. conservative estimate.*

waste to UPR-PP, the project will avoid approximately 2.4 million tonnes of CO2 equivalent in GHG emissions during its first ten years of operation. This equals the quantity of CO2 that 109 million trees absorb in a single year.

Project ASTRA PP will contribute to the decarbonisation and circularity objectives of the EU's Green Deal, the Circular Economy Action Plan and the Clean Industrial Deal by providing renewable alternatives to conventional fossil-raw-materials for PP production. It is also aligned with the ambitions laid out in the Competitiveness Compass and in the Circular Economy Act. The UPR-PP product, branded PureFive™, enables PureCycle's customers to meet the sustainability and recycled content targets from the Packaging and Packaging Waste Regulation (PPWR) and the End-of-Life Vehicles (ELV) Regulation.

The project contributes to regional economic growth and is expected to create at least 70 permanent jobs at the NextGen District (circular hub) in Antwerp, Belgium, with future growth potential at that site to ~140 FTEs within 4 years from initial start-up. The project will contribute to a circular plastics economy by using PP-waste as a renewable resource and preventing it from ending up in incineration, landfill or – worse – the environment. The project's scalability potential offers opportunities for further deployment across the EU, for example in Eastern Europe. It is expected to create positive impacts at an economy-wide level across sectors by providing green, made-in-Europe PP products that meet the growing customer demand for more sustainable solutions for packaging, automotive components, household appliances, yarn and fibers, etc.

| Participants

PURECYCLE TECHNOLOGIES INC.	United States
PURECYCLE BELGIUM	Belgium

Additional information on the EU Funding and Tenders Portal.

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