Project at a **Glance**

RenewChem scales renewable ethanol into bioalcohols, reducing fossil feedstock use with high-performance, drop-in chemical alternatives.

105k+ T
ESTIMATED ANNUAL CO_2 EMISSIONS REDUCTION

€20M
EU FUNDING THROUGH THE CIRCULAR BIO-BASED EUROPE JOINT UNDERTAKING (CBE JU)

€75M+
TOTAL PROJECT BUDGET

48 Months
PROJECT IMPLEMENTATION PERIOD

Project **Partners**

Our partners bring expertise in industry, technology, communication and dissemination across Portugal, Spain, Germany, France and Malta.

PROJECT COORDINATOR — Catalyxx

EVONIK ARKEMA Magfi SUSTAINABILITY IN ACTION

Connect **with us**

RenewChem is bridging the gap between bio-based innovation and industrial deployment. Follow our journey and stay up to date with the latest project developments through our website and social media channels.

Scan for project updates

Circular Bio-based Europe Joint Undertaking

Bio-based Industries Consortium

Co-funded by the European Union

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Neither the European Union nor the granting authority can be held responsible for them.

RenewChem

Turning renewable ethanol into **fossil-free industrial chemicals**

RenewChem is developing an industrial-scale facility in Europe to move ethanol beyond biofuel markets, converting it into longer-chain bioalcohols for high-value industrial applications.

renewchem.eu

Rethinking the **Chemical Value Chain**

RenewChem is scaling an innovative pathway for producing bioalcohols from renewable ethanol.

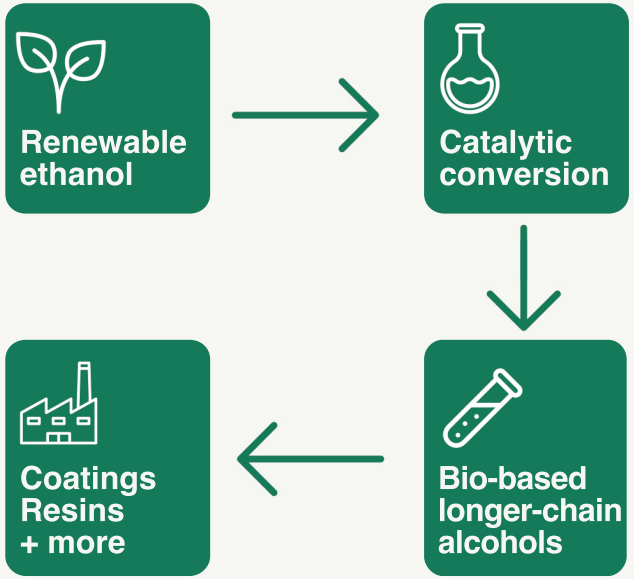
By bringing proven catalytic technology to industrial scale, the project aims to reduce reliance on fossil feedstocks while providing high-performance, drop-in alternatives for existing chemical value chains.

It will bridge the gap between bio-based innovation and industrial deployment.

This is done by demonstrating how renewable feedstocks can be transformed into high-value chemicals without requiring fundamental changes to existing infrastructure.

From Ethanol to **Industrial Alcohols**

At the heart of RenewChem is a simple transformation:



Ethanol is a two-carbon molecule. Through Catalyxx's proprietary catalytic technology, these molecules are combined to produce longer-chain alcohols with applications across the chemical industry.

These products can be used in the manufacture of coatings, resins, adhesives, solvents, polymers and other industrial chemicals, allowing renewable feedstocks to enter established supply chains and applications.

From Demonstration to **Industrial Scale**

The technology has already been demonstrated at TRL 7 at Catalyxx's demonstration plant in Seville, Spain. Now, RenewChem will bring it to industrial scale through a new facility in Sines, Portugal.

The plant is expected to produce approximately 15,000 tonnes of bio-based alcohols per year, creating a new industrial route from renewable ethanol to high-value chemical products.

This transition from demonstration to industrial production is at the core of RenewChem: turning proven innovation into a commercially viable solution for the European chemical industry.

Why It **Matters**

Renewable feedstocks

Using bioethanol instead of fossil-based raw materials.

Renewable feedstocks

Using bioethanol instead of fossil-based raw materials.

Drop-in applications

Producing bio-based alcohols that can enter existing industrial value chains and replace fossil-derived alternatives.