



Efficient and economically viable utilization of plastic waste resources.



**Project Idea /
Expertise**

Implementation of pyrolysis oil purification and hydrotreating technology for the production of circular petrochemical and fuel feedstock.

**Organization name, town
and country**

REDCHEM Sp. z o. o.
98-200 Sieradz,
ul. Zakładników 18
Poland

**Addressed
topic(s)/area(s)**

HORIZON-CID-2026-01-01 – Decarbonization of energy-intensive industries
Thematic area: chemical recycling of plastic waste, pyrolysis oil upgrading, circular hydrocarbons, integration with refineries and petrochemical plants, ISCC+ feedstock, circular economy, and decarbonization of the chemical industry.



REDCHEM SP. Z O. O.



- REDCHEM is a company established in 2022 to develop and implement an industrial chemical recycling project for plastic waste using pyrolysis technology. The project has been built on the experience of existing installations in Poland and across Europe. The company is developing a model facility in Sieradz with “ready-to-build” status, including all required administrative permits and secured industrial property with infrastructure. The planned installation will process up to 41000 tonnes per year of mixed and hard-to-recycle plastic waste, producing circular hydrocarbon fractions for the petrochemical and refining industries.
- The team possesses expertise in the management of EU-funded projects.



Visualization of the REDCHEM recycling plant, located in Sieradz at 18 Zakładników Street, Poland



A fully serviced industrial site with all required permits, located in Sieradz at 18 Zakładników Street, Poland





The project aims to develop a new integrated approach to the chemical recycling of plastic waste, enabling the industrial-scale conversion of hard-to-recycle plastics into standardized products for the petrochemical, chemical, and fuel industries.



The project addresses the key challenges faced by existing pyrolysis installations, including unstable feedstock quality, variability in pyrolysis oil parameters, the presence of chemical contaminants, as well as regulatory and market limitations related to the utilization of chemical recycling products.



Proposed project activities

- Development of technology for the production of recycled carbon fuels compliant with RED III regulations, intended for use in the fuel industry, own CHP units, and hydrogen production.
- Development of technology for the production of pyrolysis naphtha meeting the quality requirements of steam crackers used in plastic manufacturing.
- Development of a standardized feedstock preparation system for mixed plastic waste streams consisting of PP, PE, and PS.
- Development of a system for harmonizing plastic pyrolysis technological processes with regard to the quality of untreated pyrolysis oil.



Competences / Type of partner sought



Industrial partner specialized in plastic pyrolysis oil purification and hydrorefining technologies at TRL 6–8 level.

Suppliers of plastic waste feedstock, particularly PP, PE, and PS streams.

Suppliers of untreated plastic pyrolysis oil.

Equity investor / strategic financial investor.



Contact details

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B2Match profile	
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