

# The SC-HOOP Project

Sustainable Chemical recycling through  
Hoop<sup>®</sup> technology



Versalis' technology  
for plastic chemical recycling



Versalis' project for the realization  
of plastics chemical recycling  
plant at Mantua



**Funded by the European Union**  
Emissions Trading System  
Innovation Fund\*

\* Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.



versalis

Versalis, Eni's chemical company, operates nationally and internationally, offering a wide range of products and solutions - highly diversified and integrated across the entire supply chain - for multiple industrial sectors, including automotive, packaging, construction, agriculture, and household appliances. In addition to its constantly evolving traditional products, Versalis is committed to a transformation towards a chemistry of the future based on portfolio specialization, circularity, and biochemistry, with the aim of achieving specific decarbonization targets. In the context of circularity, Versalis is both carrying forward the development of complementary mechanical and chemical recycling technologies, in particular the Hoop® technology for the chemical recycling of mixed plastics.

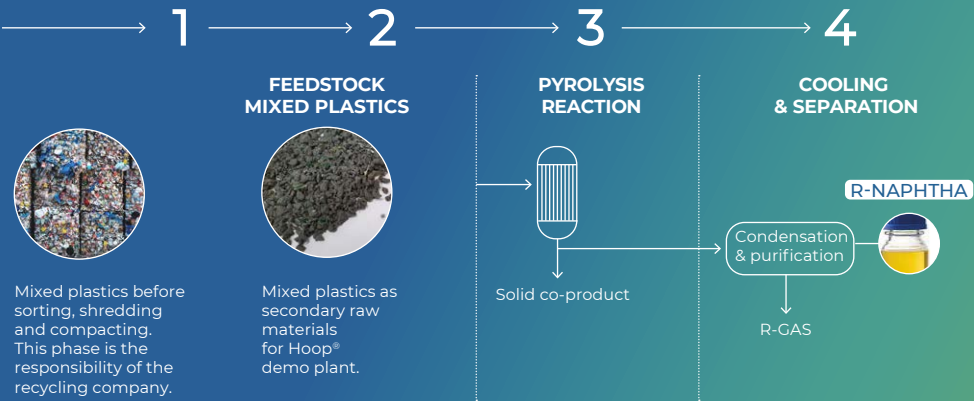
**The SC-HOOP Project**

The Versalis SC-HOOP Project indicates the realisation of the chemical recycling plant in Mantua based on Versalis' proprietary technology named Hoop®, and is designed to valorise plastic waste that is not currently recycled mechanically.

The process, which is based on the Hoop® technology will turn secondary raw material derived from recycled mixed plastic waste (feedstock) into pyrolysis oil. The latter can subsequently be used to replace or be added as an alternative feedstock to produce new intermediates as well as polymers suitable for all applications. The Hoop® technology offers advantages in terms of yield, quality of the oil obtained and higher flexibility in the use of feedstocks.

**THE SC-HOOP PROJECT**

The Versalis Hoop® technology for chemical recycling of mixed plastics



### The Mantua demo plant

The Mantua plant has a production capacity of almost 5,000 tons per year of pyrolysis oil, converting 6,000 tons per year of secondary raw material from mixed plastic waste, equivalent to a potential reduction in absolute greenhouse gas (GHG) emissions of around 140,000 tons of CO<sub>2</sub> equivalent in the first ten years of activity compared to the equivalent production of virgin naphtha from a conventional refinery and with relative avoided GHG emissions equal to 81% compared to the same reference scenario.

The entire process is designed to provide greater benefits from both an economic and environmental viewpoint in terms of circularity and reduction of emission impact.

### Winner of the EU Innovation Fund

The SC-HOOP Project, which has been awarded funding under the Innovation Fund LSC program – a European Commission's initiative that finances innovative low-carbon technologies – is strategic to achieving the challenging European recycling targets.

## THE SC-HOOP PROJECT

The closed-loop cycle of chemical recycling



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