

“Carbon2Product Austria (C2PAT): Transforming the Green Deal’s aspiration into reality!”

C2PAT GmbH & Co KG, Vienna, Austria.

C2PAT is a joint Carbon-Capture-and-Utilization project of Lafarge, Verbund, OMV, and Borealis to create a blueprint for the decarbonization of hard-to-abate industries. It will help to reduce fossil-feedstock dependency and intends to set the trend for the industry transformation.

Circularity and our ability to utilize waste streams like organic waste, used plastics, and CO₂ as feedstock instead of virgin raw materials are key for a climate neutral society and an opportunity to reduce fossil feedstock by keeping the carbon in the cycle!

C2PAT aims to develop a novel, first-of-its-kind cross-sectoral carbon value circle at industrial scale. Industrial CO₂ released during cement production (about 650,000 tons/y) is captured and transformed with green hydrogen into feedstock for a variety of renewable based chemicals and value-add plastics products of top quality and footprint performance.

The overall system is based on the integration of different technologies – from carbon capturing and green hydrogen supply to synthesis and processing into polymers – into one novel holistic carbon value circle.

By demonstrating the feasibility of an industrial scale installation at Mannersdorf / Schwechat (Austria), C2PAT will elaborate innovative operational and business models enabling a sound basis for the decarbonization of industry.

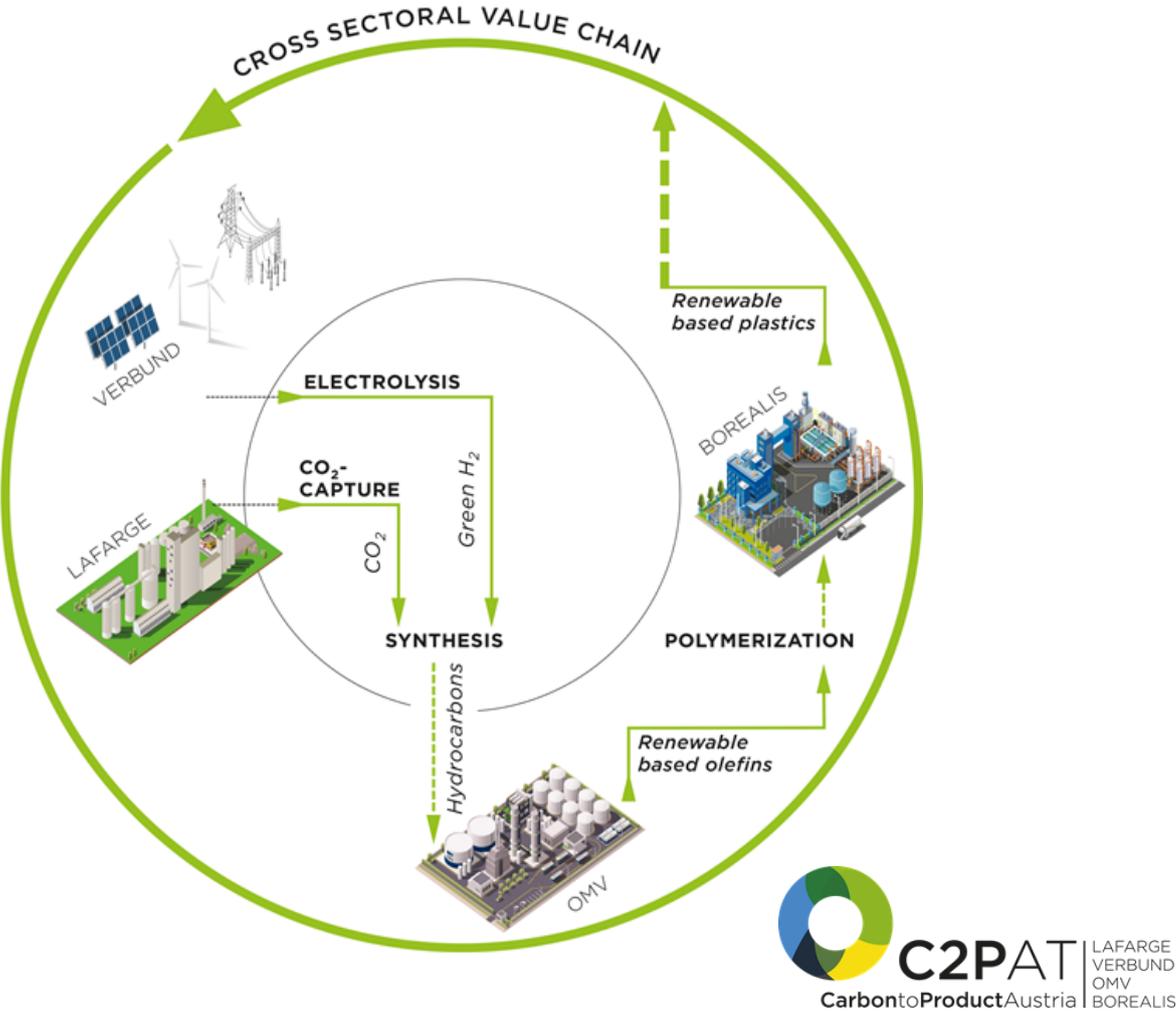
The key innovation is the utilization of CO₂ emission from cement production as feedstock for petrochemicals – an integrated and cross-sectoral approach that has never been demonstrated before.

C2PAT also demonstrates a circular economy approach in the cement and chemical sector given that renewable based plastics can be reused and recycled in various recycling streams. Partners will explore the market potential for renewable based products and related implications for the energy system and develop models to control and holistically optimize the overall value circle.

Taking the next steps towards a climate neutral economy will require the right financial as well as favorable regulatory framework conditions at the EU and Austrian national level.

With this ambitious collaboration, Lafarge, OMV, VERBUND and Borealis intend to showcase an innovative and viable solution for the transformation towards a carbon neutral economy in Europe.

Partners aim to have the Mannersdorf / Schwechat industrial scale installation on stream already by 2030 serving both as a significant contribution to Austria's climate roadmap and demonstration of the project's global scalability.



Source: C2PAT GmbH & Co KG