

DeCarTrans



Demonstrating a Circular Carbon Economy in Transport along the Value Chain

CHALLENGE

Achieving greenhouse gas neutrality and the associated restructuring of the transport sector are currently major challenges at both national and international levels. In addition to CO₂ emission-free electric and hydrogen mobility, climate-friendly propulsion options include synthetic liquid fuels, which, when considered holistically, emit less CO₂ than petroleum-based fuels and have the potential to enable nearly climate-neutral mobility.

OUR PROJECT

In the joint research project DeCarTrans, which brings together partners from research, the automotive and plant engineering sectors, as well as the mineral oil industry, the research team at TU Bergakademie Freiberg, together with its long-standing cooperation partner CAC ENGINEERING GmbH, will produce 380,000 liters of synthetic gasoline by mid-2027. This gasoline is produced from renewable methanol in a large-scale gasoline synthesis pilot plant in Freiberg. In the now sixth DeCarTrans test campaign, from November to December 2025, e-methanol was used for the first time. Together with the renewable gasoline produced from biomethanol since 2023, a total of 300,000 liters of sustainable gasoline has already been delivered to the DeCarTrans project partners. The fuels produced are used, among other things, for fuel investigations, engine and vehicle tests, as well as in motorsports and for selected demonstration and PR activities. With production over the planned 4½-year period, the project aims to prove the long-term operational capability of the technology and to demonstrate that renewable synthetic fuels can make a significant contribution to achieving climate targets.

PARTNERS

- CAC ENGINEERING GmbH
- Coryton Advanced Fuels Deutschland GmbH
- FEV Europe GmbH
- Forschungszentrum Jülich GmbH
- Lothar GmbH
- & other associated partners

FUNDING

Federal Ministry of Transport (BMV), FKZ 16RK14004D

DURATION

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Coordinated by

Project management agency



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Methanol-to-Gasoline process in the large-scale synthesis test plant

