

## Research focus

# Innovations for recyclability in wind energy

At the Fraunhofer WKI, we are developing solutions to increase recyclability in the wind energy sector, particularly in the recyclability of rotor blades. With around 30,000 wind turbines, this form of energy generation not only promotes technological innovation, but also creates jobs and reduces dependence on fossil fuels.

### Recyclable rotor blades with soluble resin systems

Rotor blades are complex multi-material composites that are currently difficult to recycle. As part of the "ReusaBlade" project, we are developing reusable epoxy resins that allow the materials to be separated by type at the end of their useful life. This should make the high-quality recycling of rotor blades easier and more economical.

In cooperation with Fraunhofer IWES and industrial partners, we are developing processes for processing and reusing glass fibres and balsa wood components so that wind turbines can be 100% recycled.

### Recycling technologies for fibre-reinforced plastics

In the EU project "RECREATE", we are developing technologies for the profitable reuse of end-of-life composite materials, particularly for the wind energy and automotive industries.

The focus is on modular design, detachable bonded joints and non-destructive testing.

We are also investigating the use of renewable raw materials to further increase sustainability.

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