REFRESH

Smart, circular recycling of wind turbine blades

Project partner

CETMA

TECHNOLOGIES DESIGN AND MATERIALS EUROPEAN RESEARCH CENTRE

Co-funded by
the European Union

CETMA

Italy

CETMA (Centro di Ricerche Europeo di Tecnologie Design e Materiali) is a not-for-profit research and technology organisation, whose mission is to support companies in their growth process by the exploitation of research results. It has 65 employees as researchers, engineers, designers and project managers. It is among the largest private non-profit research centres in Italy, with 22 years' experience in research activities on innovative materials and processes.

In the last 20 years, CETMA has strongly invested in the composite materials field in terms of facilities and competencies, becoming more and more a point of reference at European level for those companies that aim to penetrate the composites market.



CETMA's role in the project

CETMA leads the work package **Circular by Design**, which is dedicated to the project's design for circularity strategy and sustainability analyses.

CETMA also leads two key tasks:

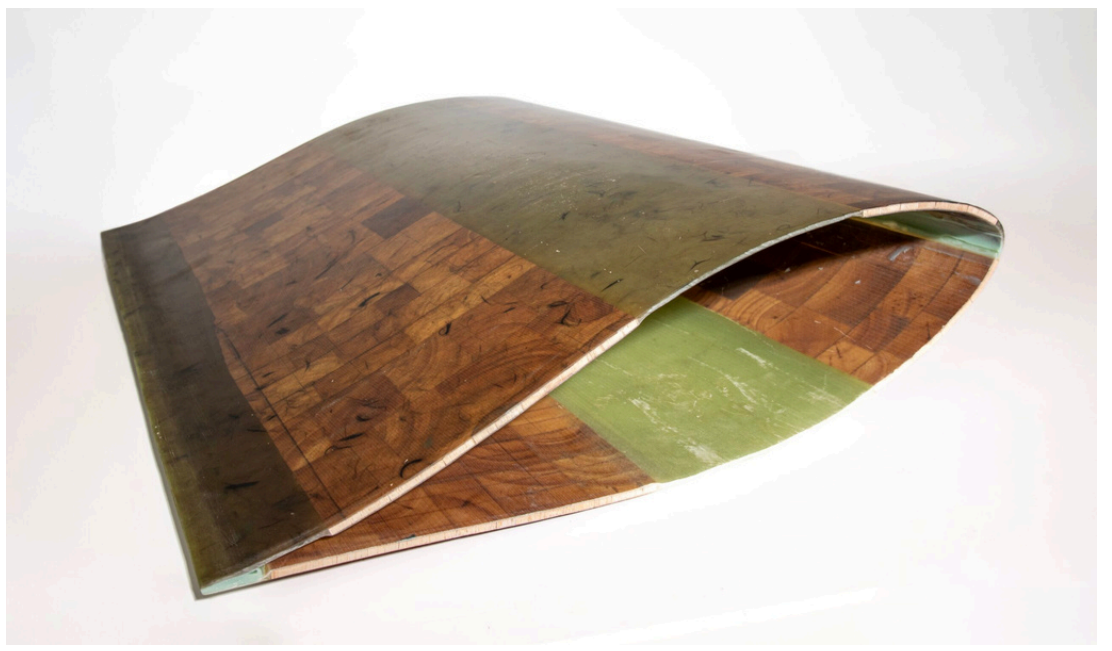
- The REFRESH **eco-design strategy** aiming to formulate guidelines for the manufacturing of new products with secondary raw materials.

- Manufacturing **end-products using secondary raw materials**: the development of products demonstrating possible applications for the recycled materials obtained from each of the REFRESH processes.



New products incorporating secondary materials





Circular blade demonstrator using thermally recycled fibres





Repurposing applications



Formwork using mechanically recycled panels

“

The goal is to develop a wide portfolio of applications exploiting all the REFRESH processes, and having an optimal balance in technical, economic and environmental performance. We have to avoid any performance gap due to the use of recycled material, be aware of costs needed for implementation and also of the potential market demand, and carefully evaluate the overall environmental benefits by means of quantitative life cycle assessment methodologies.

It is a long road to a fully circular wind energy supply chain. With REFRESH we aim to bring the sector a few steps closer.

Andrea Tinti
Senior Researcher &
Project Manager
CETMA



REFRESH

www.refresh-project.eu

REFRESH (Smart dismantling, sorting and REcycling of glass Fibre REinforced composite from wind power Sector through Holistic approach) has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement no. 101096858.

Co-funded by the European Union

The views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

REFRESH

Shaping the future of blade circularity

Insights & impact from the REFRESH project

Closing Event

2 December 2026
10:00-16:30 CET
Brussels + online

REGISTER NOW

www.refresh-project.eu

Co-funded by
the European Union