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Updates from REFRESH November-December 2025

REFRESH PROJECT NEWSLETTER



Welcome to the newsletter of the REFRESH project. Our goal is to develop a smart, circular solution for end-of-service wind turbine blades, transforming what has been considered waste into valuable new resources and sustainable products. *Read on to discover the latest news ...*

REFRESH completes second review meeting



The REFRESH team at Gees Recycling in Aviano.

The REFRESH partners gathered in Italy on 26-27 November for the project's second review meeting. This event was hosted by Gees Recycling in Aviano and attended by European Commission Project Officer Pablo Vicente Laiglesia and external expert Rik Voerman.

After three years of intensive work by every partner, REFRESH is truly demonstrating the circularity of composite wind turbine blades. Starting from a smart cutting solution (ETAT9) and an efficient shredding and sorting stage (MTB), the REFRESH value chain offers optimised recycling approaches (Gees, Gjenkraft, CIRCE, Enecolab) while an eco-design strategy (CETMA) is opening up a world of possibilities for the recycled materials, from construction products (ACCIONA) such as formwork, to completely closing the loop by using recycled blade materials in a new blade.

All processes are being supported by comprehensive sustainability analyses (RINA) and a novel blockchain traceability platform (TECNALIA). Effective communication and dissemination activities (EuCIA) underpin the project's technical progress.

The meeting provided an opportunity to visit Gees' new mechanical recycling line. Currently being commissioned, this will manufacture panels suitable for a broad range of applications in construction and beyond. Virtual tours offered a view of Gjenkraft's advanced thermal process

in Norway, which recovers glass fibre for diverse potential uses, while Enecolab's thermo-chemical process in Italy converts non-recyclable dust into syngas for energy.

[Read more](#)

Stay tuned! During the coming months we'll highlight the partners' individual achievements as well as the success of the whole consortium in taking REFRESH from concept to reality.

Enhancing transparency and decision-making in blade recycling



TECNALIA is developing a blockchain traceability platform.

The REFRESH project introduces a pioneering system that leverages blockchain technology to ensure transparent, secure, and trustworthy tracking of wind turbine blades throughout their end-of-life (EoL) and recycling options. This innovative approach aims to revolutionise the management of EoL blades, promoting sustainability and circular economy principles within the renewable energy sector.

The system combines a decentralised blockchain network with advanced privacy-preserving tools, enabling stakeholders such as wind farm operators, decommissioners, recyclers, and waste managers to reliably share and verify data without compromising sensitive information. Complementing the traceability framework is a smart decision-making tool that assists stakeholders in selecting the optimal recycling pathway. This privacy-aware tool utilises cutting-edge cryptographic techniques, including proxy re-encryption and self-sovereign identity, to evaluate environmental impacts like carbon footprints without revealing individual inputs.

"Our integrated solution enhances trust and accountability in the sustainable management of wind turbine blades," says David García-Estévez, Project Manager at TECNALIA. "By

combining transparency with privacy, we enable stakeholders to make informed decisions that align with environmental goals and regulatory compliance.”

Both tools will be validated by the project partners in 2026.

[Read more](#)

REFRESH webinar

A green rectangular poster for a REFRESH webinar. In the top left corner is the REFRESH logo, which consists of a stylized white wind turbine icon followed by the word "REFRESH" in white capital letters. Below the logo, the text "Scaling up recycling technologies for wind turbine blades" is written in large, bold, white capital letters. Underneath this, "Online workshop" is written in a slightly smaller white font. The date and time "17th November, 14:00-16:00 CET" are listed in white. At the bottom left, the text "REGISTER NOW" is in white. On the right side of the poster, there is a faint, large image of three white wind turbines. In the bottom right corner, there is a small white box containing the European Union flag and the text "Co-funded by the European Union".

REFRESH

**Scaling up recycling technologies
for wind turbine blades**

Online workshop

17th November, 14:00-16:00 CET

REGISTER NOW

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We were delighted to welcome an audience of more than 90 industry and research professionals to the REFRESH webinar on 17th November to learn about the project's innovative technologies for recycling end-of-service wind turbine blades.

The presentations offered an overview of the REFRESH blade recycling technologies, the challenges to be addressed, and the innovations REFRESH is developing. FAQs were discussed and questions from the audience were addressed in a Q&A session.

For those who missed the webinar, or would like to take another look, the recording is available on the REFRESH YouTube channel. [WATCH NOW](#)

The presentations are available on the [REFRESH website](#).

EVENTS

Wind Turbine Blades 2025



REFRESH partners ACCIONA and RINA teamed up on the presentation **REFRESH: scaling recycling pathways for wind blade composites** at AMI's Wind Turbine Blades conference in Düsseldorf in December.

The presentation saw Anurag Bansal, Head Strategic Innovation at ACCIONA, and Ioana Muntean, Sustainability Consultant at RINA Consulting, highlight key aspects of the project:

- Industrial-scale methods for dismantling and processing blades;
- Development of market-ready intermediate products;
- Application-driven final products supporting EU sustainability goals.

[Read more](#)

Wind Blade Materials and Recycling Forum 2026



REFRESH will be participating in the 3rd Annual Wind Blade Materials and Recycling Forum in Amsterdam in February 2026. Project coordinator Daniel Grisenti of RINA Consulting will speak on the second day of the conference. The presentation is entitled **REFRESH: Scaling up sustainable end-of-life solutions for blades**.

This event, organised by Leadvent Group, will explore topics including wind turbine blade materials and manufacturing, blade sustainability and circularity, scaling blade recycling and repurposing, recycling processes and methods.

[Read more](#)

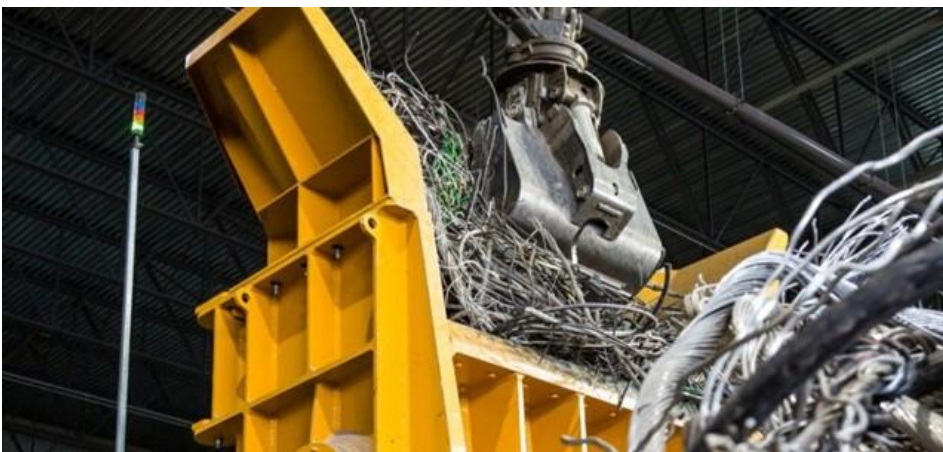
MEET OUR PARTNERS

ETAT9



French group ETAT9 is a major actor in environmental services, including decontamination and waste management. As part of the REFRESH project, the company is designing and prototyping optimised equipment for cutting large wind turbine blades. [Read more](#)

MTB



MTB is a leader in industrial waste management, as a recycler of complex industrial waste and as a manufacturer of recycling equipment. In REFRESH, MTB applies its expertise in shredding and separating technologies to treating wind turbine blades. [Read more](#)

About REFRESH

REFRESH (*Smart dismantling, sorting and **RE**cycling of glass Fibre **RE**inforced composite from wind power **S**ector through **H**olistic approach*) is a European project aiming to develop and demonstrate a novel circular, smart system enabling improved recycling of glass fibre reinforced composites derived from wind turbine dismantling or reblading.

The REFRESH project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement no. 101096858.

The project partners are:

- RINA Consulting (Italy) - project coordinator
- ACCIONA Construcción (Spain)
- CETMA (Italy)
- CIRCE (Spain)
- Enecolab (Italy)
- ETAT9 (France)
- EuCIA (Belgium)
- GEES Recycling (Italy)
- Gjenkraft (Norway)
- MTB Manufacturing (France)
- TECNALIA (Spain)

For further information please visit refresh-project.eu

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