



Blade Circularity Solution

Solution de circularité pour les pales

Invenergy

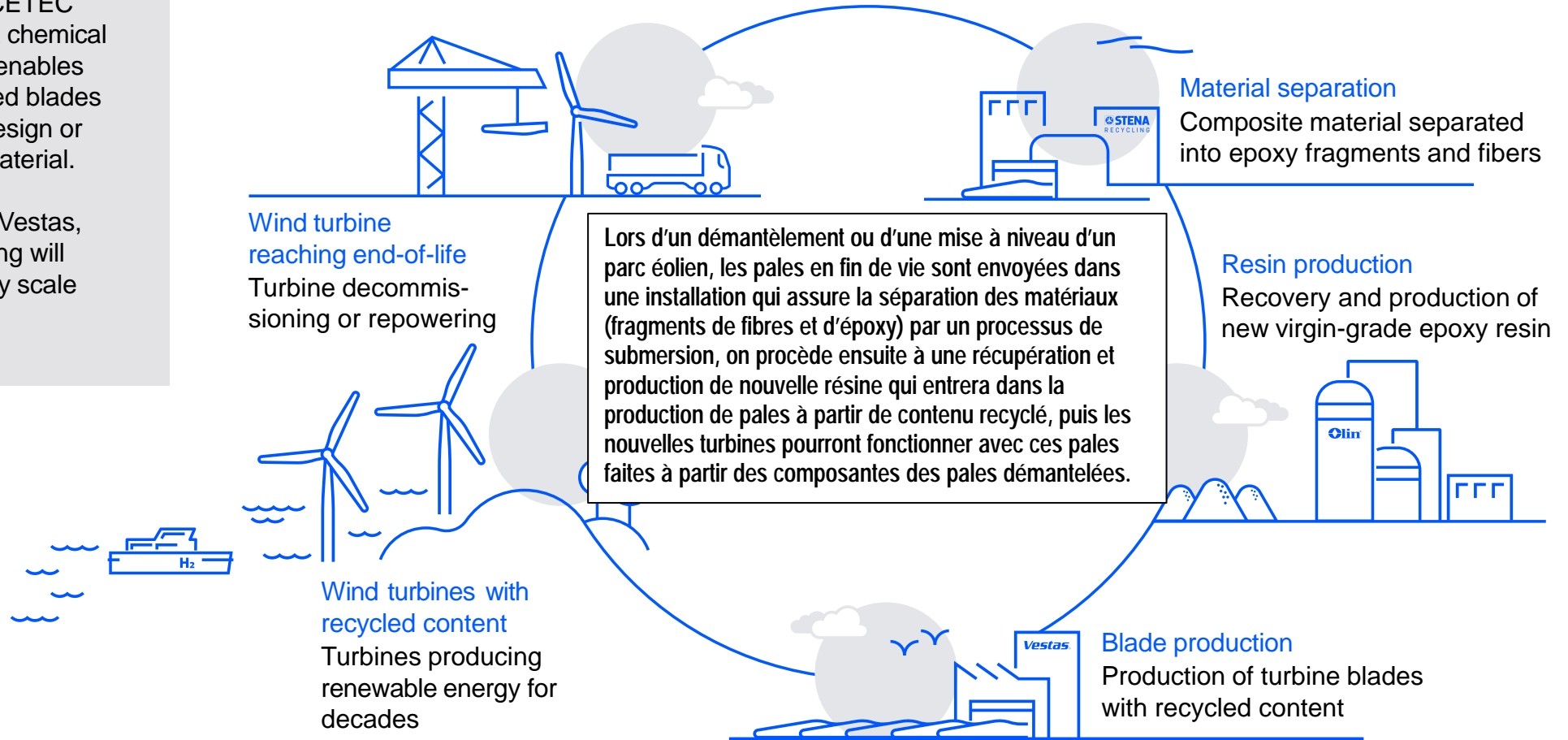
Blade Circularity

New discovery enables **recycling of all epoxy-infused blades**, both for legacy and current models

A breakthrough in the CETEC project has resulted in a chemical solution that efficiently enables recycling of epoxy-based blades without changing the design or composition of blade material.

A partnership between Vestas, Olin and Stena Recycling will explore how to optimally scale the solution.

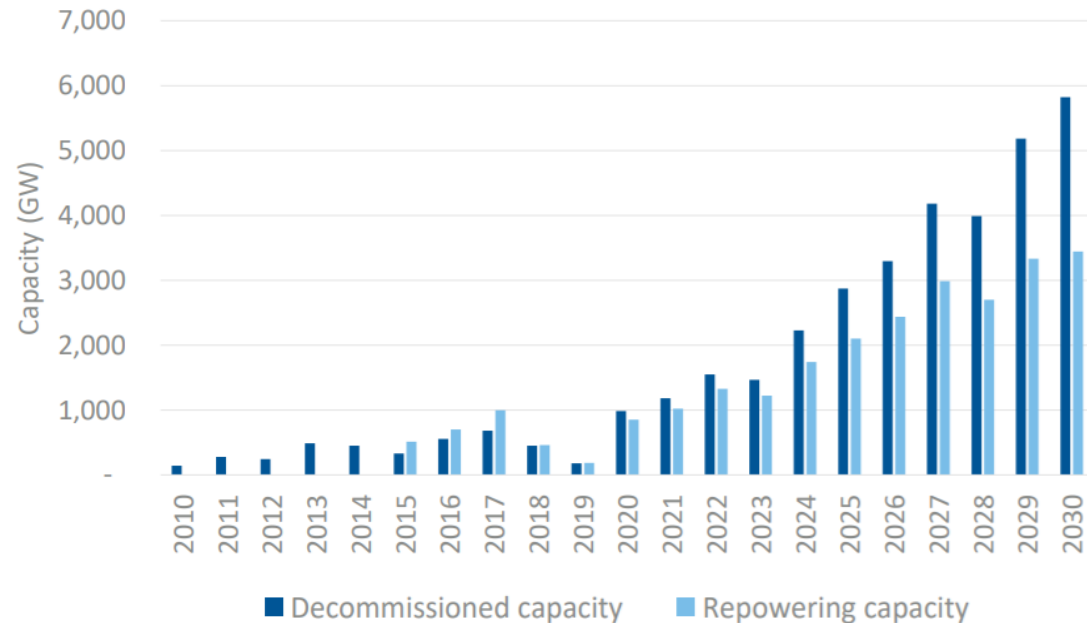
De récentes découvertes ont permis d'établir un processus chimique qui assure le recyclage efficace des pales, issues d'un partenariat entre Vestas, Olin et Stena Recycling qui explorent comment mettre en place la solution de façon optimale.



Challenge within the wind industry: recyclability of wind turbine blades

Thousands of blades are expected to be decommissioned in Europe in the following years

Repowering volume accumulate to +20 GW by 2030



Source: WindEurope

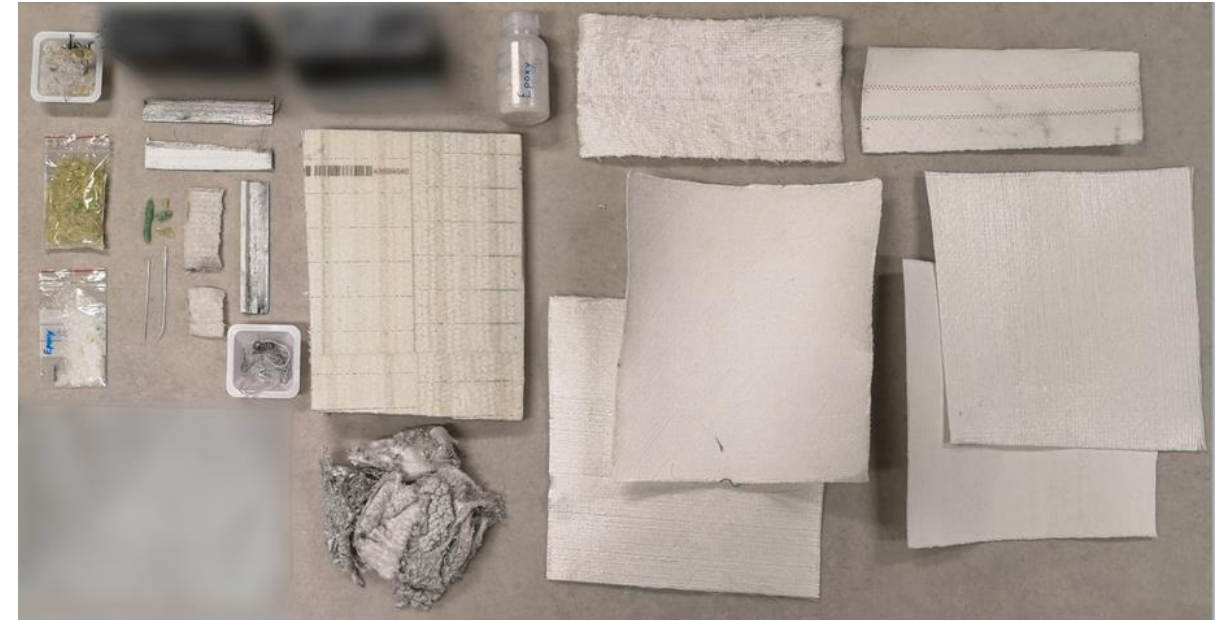
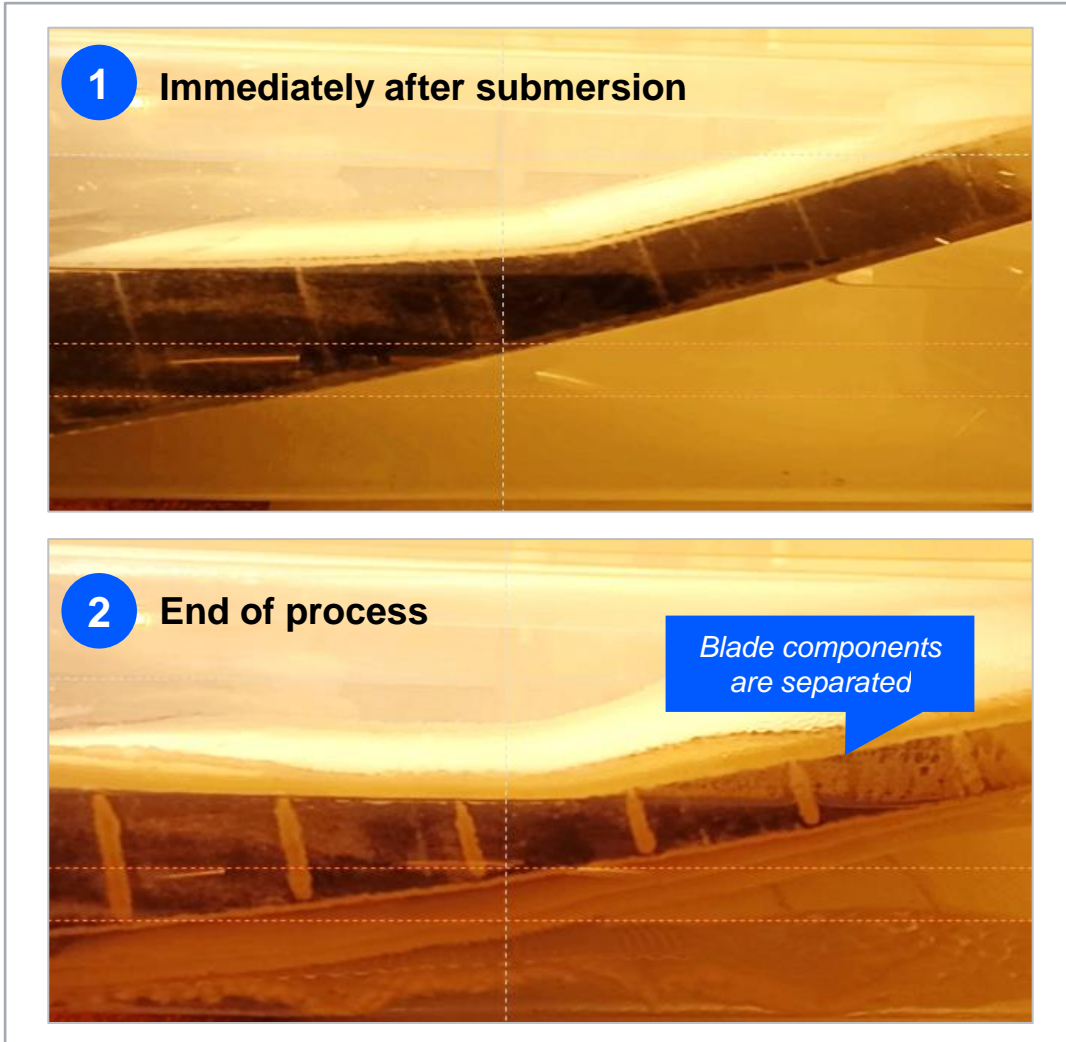
European ON wind farms older than 15 years



Source: WindEurope

CETEC consortium discovered process for all epoxy infused blades

Within 24 hours a 0.5x0.5m fraction of a standard Vestas blade is dissolved enough to easily separate materials



Components after separation

- Paint
- Composite (fiber glass & epoxy)
- Foam
- Carbon pultrusions
- Glue line
- T-pultrusion

Composantes après séparation: peinture, composite (fibre de verre et epoxy), mousse, pultrusion de carbone, colle, t-pultrusion

Next steps for blade circularity solution

Pilot with industrial partners

Partnership with Olin Epoxy (epoxy supplier) and Stena Recycling (waste handler) enters a 2-year pilot period starting now.

Developing the business case

The partners will focus on industrialisation of the technology and the development of a strong business case to make the solution cost-effective.

Recycling facilities

As a first step, partners will construct pilot recycling facilities to offer the circular blade recycling solutions.

Scale-up

Based on success of pilot, partners may scale and expand the availability of the solution.



Cette découverte nécessitera l'implantation d'un projet pilote (un projet de deux ans qui vient de débuter), le développement d'un plan d'affaires, l'installation d'usines de recyclage puis l'augmentation des capacités rendant cette solution accessible.