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## Vestas Blade Recyclability

Vestas is committed to working with the utmost respect for the environment in everything they do. In fact, Vestas has been named the most sustainable company in the energy industry the third year in a row by the Corporate Knights index and the overall third most sustainable company in the world in 2024.

As part of the corporate strategy, Vestas is developing a global circularity solution including recycling damaged or end-of-life blades. On the North American side, until the circular economy solution is fully implemented, Vestas utilizes a number of blade decommissioning strategies, including a dedicated blade recycling facility in Marengo, Iowa. This plant receives blades from projects installed in the United States, removes metal inserts, copper wiring and other metal products (which are sent to currently well-established recycling channels) and then proceeds to reduce the remaining composite parts of the blade into particles no larger than 5 cm, consisting mainly of wood and fiberglass. These materials can then be used in various products, including concrete.

Furthermore, most materials used to manufacture wind turbines are recyclable in channels that already exist today (85-90% of the total mass of the wind turbine). The materials from the wiring, foundation, tower, nacelle and transformer can be reused or recovered, in addition to a large part of the rotor.

The table on the following page offers a list of basic materials that make up a blade along with their ability to be recycled. Please note that this is not an exhaustive list as the full composition of Vestas blades is considered proprietary and cannot be shared in detail. However, the inputs below can be considered representative for Vestas blades.

Average Content	Approximate Average	Currently Recyclable	Recycling in Development
Low alloy steel	3%		
Aluminum	less than 1%		
Copper	less than 1%		
Polymers (all)	8%		
Organic materials	less than 1%		
Paint	less than 1%		
Blade resin	25%		
Glass fiber	50%		
Carbon fiber	11%		
Magnets	less than 1%		
Electrics - Cable	less than 1%		
PVC foam	less than 1%		
PUR adhesive	less than 1%		

Yours sincerely  
**Vestas Wind Systems A/S**



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