

# The wind turbine blades have fallen down

Why did a 71-metre-long wind turbine blade collapse?

The collapse of the 71-metre-long (232 ft) wind turbine blade comes at a time when nearly half of the machines at the site are not working amid an ongoing process conducted by turbine maker Siemens Gamesa for the repair of previously identified manufacturing defects. Fifteen out of the 34 turbines were stopped in March.

Did a Siemens Gamesa wind turbine blade fall off?

COPENHAGEN, April 11 (Reuters) - A Siemens Gamesa wind turbine blade weighing 22 metric tons fell off the machinery on Wednesday but no one was hurt, the Odal Vind wind farm in Norway said, a month after it halted several of the company's turbines because of blade damage.

Are giant wind turbines falling over?

Giant Wind Turbines Keep Mysteriously Falling Over. This Shouldn't Be Happening. The taller the turbine, the more epic the tumble. Turbine failures are on the uptick across the world, sometimes with blades falling off or even full turbine collapses. A recent report says production issues may be to blame for the mysterious increase in failures.

What happened to the Odal wind turbines?

While many of the problems affect the inner workings of the turbines, the Odal accident is not unique, with blade losses reported this year at another wind farm in Norway as well as sites in the US and Scotland. The industry does not publish precise failure rates, making it hard to ascertain how widespread defects are.

Should wind farms be disposed of tough turbine blades?

As more wind farms are decommissioned ways need to be found to dispose of their tough turbine blades.

Did a wind turbine break off?

The turbine appeared to have broken off about 60ft (18m) from its base. The tower had snapped in two and the blades were crushed in the fall. Dawn Walters, from Gilfach Goch, lives high up on the mountain side and can see the wind turbines from her house. "I woke at six in the morning and just heard a funny noise, like a motor," she said.

It is not possible to build VAWTs at the large scales we see in HAWT wind farms. The biggest VAWT ever built was the 110m tall, 3.8MW "OLE" turbine in Quebec, Canada. However the rotor bearing failed in 1993 under the 880 ton weight it had to support.

The broken turbine blade could fall into the sea "soon," the company said. Broken wind turbine. The meeting was the first chance for residents of the island to speak to Vineyard Wind CEO Klaus Moeller about the turbine blade failure and clean up. "Who would have expected this to fail so quickly?" one resident said.

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the upper part of the wind turbine to fall down. However, the connection failure was sudden, ... Monitoring Static Test of a Wind Turbine Blade: August 1999. National Renewable Energy Lab ...

Most turbines have three blades which are made mostly of fiberglass. Turbine blades vary in size, but a typical modern land-based wind turbine has blades of over 170 feet (52 meters). The largest turbine is GE's Haliade-X offshore wind ...

Fortunately, we have a good deal of experience using with residential wind turbines--farmers in the rural west have been using wind as their primary energy source for nearly a century. We know that a few of the concerns that limit commercial turbines to three blades are not a concern for residential turbines.

Blades of a wind turbine totaling 100 tons fell off 140 meters and broke into pieces in the Mekong Delta province of Bac Lieu on Friday. ... The inside of a blade was exposed after the fall. The turbines in the project have been suspended after the incident. The rotor, which ...

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Kim Jonny Karlsen was at home last month when a 20-tonne turbine blade the length of a Boeing 747 broke off its tower at the nearby Odal wind farm and crashed into the fir trees below.

The cost of replacing a bearing can vary significantly, depending on the turbine model and the downtime involved, typically from a few thousand to tens of thousands of euros. 2. Wind Turbine Blade Failure What is it? Blade failure refers to damage or deterioration of the turbine blades, which are essential for capturing wind energy. Possible Causes

The combination of bend-twist-coupled blades and flatback airfoils enabled wind turbine blades to be made longer, lighter, and cheaper. Evolving from an academic concept to a widely accepted commercial product, bend-twist-coupled blades with flatback airfoils contributed to estimated energy-cost reductions of nearly 20%.

UPDATE THURSDAY 9:05 a.m.: Ian Campbell of Vineyard Wind tells CAI that as of 8:00 a.m. the damaged blade was still hanging on. As of late Wednesday night part of a blade from an offshore Vineyard Wind turbine was dangling and threatening to snap.

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Wind turbines are designed to withstand harsh environmental conditions with a minimum of downtime, but from time to time we read about failures in the news that causes a little extra attention, with fire caused by extreme friction, falling parts or - a collapsed tower.

Evolution of Wind Turbine Blades. Wind turbines have come a long way since their inception. Early windmills, dating back thousands of years, had simple wooden blades. These rudimentary designs gradually evolved into more efficient shapes, but it wasn't until the late 19th and early 20th centuries that serious research into aerodynamics began. ...

Danish company Vestas, the largest wind turbine producer in Europe, announced last year an approach that uses a liquid chemical solution to break down the blades into materials which can then ...

The tower had snapped in two and the blades were crushed in the fall. Image caption, Dawn Walters says she did not expect to hear the turbine come crashing down

The blades also damaged a storage house of a local fish farm. There were three people in the house when the blades dropped but no one was hurt, said Nguyen Van Kien, owner of the farm. Wind turbine blades are made by light materials such as plastic and fiberglass. The inside of a blade was exposed after the fall.

The wind turbine blade on a wind generator is an airfoil, as is the wing on an airplane. By orienting an airplane wing so that it deflects air downward, a pressure difference is created that causes lift. On an airplane wing, the top surface is rounded, while the other surface is relatively flat, which helps direct air flow. ...

Having fewer blades reduces drag, but a two blade design results in "wobble" when motors turn the nacelle to face the wind (yaw). Single-blade turbines have no stability. While two and three blade turbines are the most common, it's important to understand why three rotors are used. Note that advances in technology are even exploring bladeless ...

Scroll down for additional background, and check back for updates. Catch up quick: On Saturday, July 13, a Vineyard Wind turbine blade suffered significant damage 15 miles southwest of Nantucket; Since then, thousands of pieces of fiberglass shards and green and white foam have washed up on south coast Nantucket beaches

Broken blade bolts were scattered around turbine 71 at Portland General Electric's Biglow Canyon wind farm after the turbine threw a blade in the early hours of Feb. 1. Hours before the blade throw, a driver delivering fertilizer became stuck in close proximity to the turbine and had to be towed out.

Wind turbine blades are the primary components responsible for capturing wind energy and converting it into mechanical power, which is then transformed into electrical energy through a generator. The fundamental goal of blade design is to extract as much kinetic energy from the wind as possible while minimizing losses due to friction and turbulence.

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A detailed review of the current state-of-art for wind turbine blade design is presented, including theoretical maximum efficiency, propulsion, practical efficiency, HAWT blade design, and blade ...

The giant blades of a 34-metre wind turbine broke off and flew through the air during Storm Gerritt. Dramatic footage of the incident also revealed large parts of the ...

Federal regulators have shut down Vineyard Wind while they investigate what caused a 107-meter turbine blade to break and spill fiberglass into the ocean. ... Vineyard Wind said it dispatched vessels to recover the large pieces of blade that had fallen into the water, but early this week Nantucketers began finding sharp shards of fiberglass ...

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