

# Wind blade generator infringement case

Did GE infringe on a '776 wind turbine?

The second patent, the '776, is related to a method for enhancing the performance by improving the operation of cooling and maintenance. Jurors had found that GE's Haliade-X wind turbine model had infringed on the '776. General Electric's flagship turbine to be used for their offshore windfarm is the Haliade-X.

Did GE infringe on the '776?

Jurors had found that GE's Haliade-X wind turbine model had infringed on the '776. General Electric's flagship turbine to be used for their offshore windfarm is the Haliade-X. With a 12MW generator rating, it is labelled the world's most powerful offshore wind turbine.

Does GE have a business case for a next generation turbine?

GE further noted that "in September 2016, an initial business case was presented to the [Company] [description of internal GE process] for the continuation of work on the potential next generation turbine.

Is GE still committed to the US offshore wind market?

Steve Dayne, Head of Offshore North America for Siemens Gamesa, has welcomed "the jury's verdict on our patent". The demand for renewable energy continues, and this financial setback will not stop General Electric, as a spokesperson for GE commented "remain committed to the US offshore wind market".

What is the fine imposed on General Electric Company/LM Wind power holding?

General Electric Company/LM Wind Power Holding in violation of Article 4(1) of Regulation (EC) 802/2004. fine of EUR 52 000 000 is imposed on General Electric Company pursuant to Article 14(1)(a) of Regulation (EC) No 139/2004 for the infringement referred to in Article 1 of this Decision.

Does the GE offshore wind business expect corporate approval?

The GE Offshore Wind business does not expect corporate approval before successfully reaching [description of internal GE process]"<sup>38</sup> (emphasis added). Request for information to GE, dated 27 January 2017, question 1. [...]. GE Reply to request of information of 27 January 2017, dated 30 January 2017.

In September 2022, a US Federal judge in Boston barred GE from "making, using, offering for sale, selling, importing (into), or installing in the United States" the Haliade-X ...

Carbon fiber and aircraft aluminum wind turbine blades for true power, speed, and torque. The best blades on the market for small wind turbines made in the USA. ... 7 Raptor Generation 4 Wind Turbine Generator Blades and Hub . \$106.99. ...

A detailed review of the current state-of-art for wind turbine blade design is presented, including theoretical

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maximum efficiency, propulsion, practical efficiency, HAWT blade design, and blade loads. The review provides ...

Blade and generator are the key elements of small wind turbines. Many researchers are working to enhance reliability and performance of blades and generators. ... A small wind turbine Blade case ...

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Specifications: Number of blades: 3 Rated power: 600W Rated voltage: 24V Start-up wind speed: 2.5m/s Rated wind speed: 8 m/s Survival wind speed: 40 m/s Blade material: Nylon fibre Generator type: Three phase permanent ...

airfoils were tested on the same small generator to find the better performing airfoil. Afterwards two larger homemade wind turbines were built. The first turbine constructed was a small, three rotor horizontal axis wind turbine (HAWT) with a swept area of approximately 1.5 m. 2. This turbine used small yet high performance plastic filled airfoils.

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. ... In this case, lift is shown related to the ...

Early history of wind turbines: (a) Failed blade of Smith wind turbine of 1941 (Reprinted from []); and (b) Gedser wind turbine (from []). The Gedser turbine (three blades, 24 m rotor, 200 kW, Figure 1b) was the first success story of wind energy, running for 11 years without maintenance. In this way, the linkage between the success of wind energy generation technology and the ...

GE Renewables must pay European wind turbine maker Siemens Gamesa \$30,000 per megawatt in royalties for patent infringement on a technology used in its next generation 12-MW to 14-MW Haliade-X...

The aerodynamic performance of newly planned as well as existing wind turbines can be improved by eliminating stall. Vortex generators (VGs) can effectively delay air separation occurring on the ...

The application of such tools to the blade aerodynamic design can be interesting, allowing the optimization of the blade design parameters in order to, for example: maximize generated power under a given operating condition, maximize AEP for a specific wind speed distribution (site-specific optimization), minimize the amount of blade material and/or minimize ...

Gust is a strong deterministic wind disturbance in the atmosphere. When the aircraft encounters gust, the body will produce additional unsteady aerodynamic force and torque, which will adversely affect the flight

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performance of the aircraft [1, 2]. Modern civil aircraft, such as large passenger aircraft, emphasizes economy, comfort, safety and reliability, requires higher ...

Wind turbine manufacturer Siemens Gamesa said it had received a favourable ruling against turbine manufacturer General Electric (GE) in a federal court in Massachusetts, USA.

General Electric Co. could face millions in royalty payments after a Massachusetts federal jury found it infringed a patent belonging to rival Siemens Gamesa ...

The transition area of the blade had a large relative thickness of airfoil, which was prone to the flow separation. The vortex generators (VGs) could restrain the flow separation. In this paper, the VGs were installed at the transition area of ...

LM Wind Power is a leading rotor blade supplier to the wind industry. They offer high-quality, reliable wind turbine blades to power the energy transition. They are committed to sustainability and strive to be leaner, greener, and cleaner in their operations. 4. Gurit. Website: [gurit](http://www.gurit.com) ; Headquarters: Zurich, Zurich, Switzerland; Founded: 1835

LM Wind Power began producing wind turbine blades in 1978, and although the basic blade design hasn't changed, we have continued working on developing the world's longest wind blades. Finding the perfect balance between wind turbine blade design and aerodynamics presents the greatest design challenge for each wind turbine blade length.

US Jury Rules in Favour of Siemens Gamesa and Against GE in Patent Infringement Case. Technology June 21, 2022, by Adnan Durakovic Wind turbine manufacturer Siemens Gamesa said it had received a favourable ruling ...

The rotor blade is the key component of a wind turbine generator (WTG) and converts the energy of the wind into a mechanically useful form of energy. ... In the case of rotor blades, this nowadays consists of polymers such as EP and UP, but researchers are also experimenting with polyurethane (PU) and polymers with thermoplastic properties as ...

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 turbine, with blades 351 feet long (107 meters) - about the same length as a football field. When wind flows across the blade, the air pressure on one side of the blade decreases.

The angular position (?) of each blade varied from 0° to 120°, the blades were segmented (r), and different wind speeds were tested, such as cutting, design, average, and maximum.

What Is the Lifespan of a Wind Turbine Blade? Wind turbine blades last 25-30 years. Carbon fiber can extend

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the lifespan of blades since carbon fiber spar caps last up to 63 years. Fiberglass has a typical lifespan of ...

The aerodynamic design of an airfoil significantly impacts blade airflow. The wind turbine blade is a 3D airfoil model that captures wind energy. Blade length and design affect how much electricity a wind turbine can generate. Blade curvature, twist, and pitch all affect performance and the profile of the airfoil has a direct effect.

Around 80-90% of the wind turbines total material can be recycled (Jensen, 2019; Wind Europe, 2020), the pieces like the tower, foundation, components of the gearbox, and the generator, can be ...

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