Wind blade power generation infringement

What are some patents based on wind energy technology?
They include General Electric patents for turbine control and rings/shrouds, Clipper and MRIGlobal (NREL) patents for variable speed turbines, Northern Power patents for direct drive turbines, and an early DOE patent describing wind-powered cooling towers. This report focuses on wind energy technology.

Are wind turbine blades a consumer issue?
However,in case of wind turbine blades,this issue is very likely not applicable,as the consumers are most often companies such as energy providers and wind turbine blades a large structures.

How many generations of wind energy patents are there?
This means that we trace forward through two generationsof citations starting from DOE-funded wind energy patents; and backward through two generations starting from the patents owned by leading wind energy organizations. Hence there are two types of links between DOE-funded patents and subsequent generations of patents:

What is a patent for a wind turbine?
The patent at the head of Table 9 (US #7,004,724) is assigned to General Electric and describes a method for avoiding asynchronous loads in wind turbines. Since being issued in 2006, this patent has been cited as prior art by 86 subsequent patents, almost seven times as many citations as expected given its age and technology.

How many patents are there on wind turbine rotors?
This is one of threehighly-cited WETO-funded General Electric patents at the head of Table 9,with the others describing wind turbine rings and shrouds for load management (US #6,951,443) and a method for detecting ice on wind turbine rotors (US #7,086,834).

How many wind energy patents are linked to Doe?
In total,794of General Electric's wind energy patent families are linked via citations to earlier DOE-funded wind energy patents,740 of which are linked to WETO-funded patents. Vestas has 380 patent families linked to DOE (345 to WETO),while Siemens has 316 families linked to DOE (296 to WETO).

In an earlier lawsuit, Gamesa Eolica, S.A. v. General Electric Co., 359 F. Supp. 2d 790 (W.D. Wisc. 2005), Gamesa sued GE in 2004 for infringement of a patent related to a variable speed wind turbine with a special ...

This mechanical power can be used for specific tasks (such as grinding grain or pumping water) or a generator can convert this mechanical power into electricity. A wind turbine turns wind energy into electricity using the aerodynamic force ...

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These turbines have rotor blades just over 115m long. 5 When rotating at normal operational speeds, the blade tips of a 15MW wind turbine sweep through the air at approximately 230 mph! 6 To withstand the very high ...

On June 17, 2022, a federal jury in the District of Massachusetts ruled in favor of Finnegan client Siemens Gamesa Renewable Energy, finding that General Electric infringed a Siemen"s patent covering offshore wind turbines. Siemen ...

affects the electricity output and economic viability of wind power projects. Historically, wind turbine blades have evolved significantly from the simple and straight designs of the early days ...

V A WT design to finally see greater use in the small to medium size wind markets and make significant contributions in the distributed power generation arena. Statement ofResearch . As ...

What Is the Lifespan of a Wind Turbine Blade? Wind turbine blades last 25-30 years. Carbon fiber can extend the lifespan of blades since carbon fiber spar caps last up to 63 years. Fiberglass has a typical lifespan of ...

An AR less than 0.8 is not advised for power generation at any scale for a wind turbine. For medium and large turbines, tip losses had a greater influence than Re [59]. GF ...