

## PEES Power Systems

# The cost of one blade of a wind turbine generator



## Overview

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Wind energy farms need to consider the cost of a single wind turbine blade in their budget. This report is available at no cost from the National Renewable Energy Laboratory (NREL) at [www.nrel.gov](http://www.nrel.gov). Blade costs vary based on size, material, technology, and logistics. In this detailed guide, we'll explore the factors influencing blade costs, average price ranges, hidden expenses, and why lifecycle management is just as important as upfront investment. Maintenance costs for wind turbines typically range from \$42,000-\$48,000. Wind turbine blades represent a significant portion of a turbine's overall expense; their cost varies greatly depending on size and materials, typically ranging from \$200,000 to over \$400,000 per blade. Wait, no—that's not entirely accurate.

## The cost of one blade of a wind turbine generator

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### How Much Does A Wind Turbine Cost?

Modern best-in-class 1-3+ megawatt onshore wind turbines generally cost approximately \$1.3 million to \$2.2 million per megawatt in upfront equipment capital and manufacturing expenses.

### How Much Does a Wind Turbine Blade Cost? Price Breakdown

Discover how much a wind turbine blade costs in our detailed price breakdown. Learn key factors affecting price and make informed renewable energy decisions!

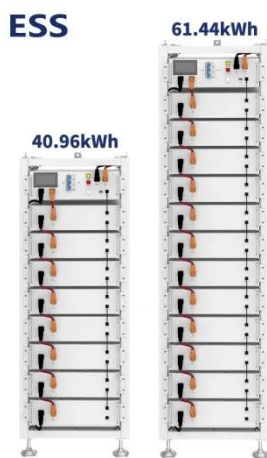


### Wind Blade Generator Cost: Breaking Down the \$1.5 Million Price Tag ...

You know, wind energy adoption grew 12% globally in 2024, but here's the kicker: a single wind turbine blade now costs between \$100,000-\$1.5 million. Wait, no--that's not entirely ...

## Wind: Cost of Components

The average cost of building 1 MW of wind generation capacity has increased almost 40% since 2020 from over USD \$850,000/MW to almost \$1,200,000/MW. By primary component, the ...

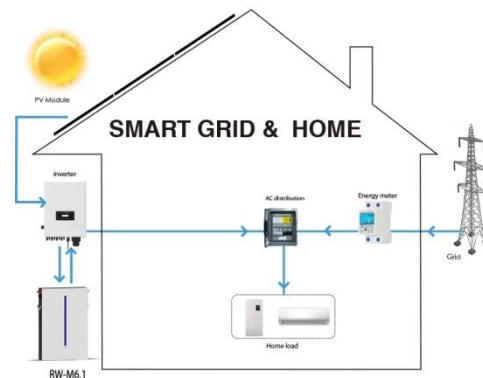


## A Detailed Wind Turbine Blade Cost Model

This work aims to define a detailed parametric blade cost model for modern multimegawatt wind turbine blades via vacuum-assisted resin transfer molding (VARTM).

## Cost Of Wind Turbine Blades

Wind turbine blades cost a staggering \$100,000 to \$500,000 each, and there's no bargain-bin discount. Materials make up 70% of the cost, with fancy fiberglass and carbon fiber composites ...



## Wind Turbine Cost Guide 2025: Complete Pricing Breakdown (\$700 ...

Wind turbine prices range dramatically from \$700 for small residential units to

over \$20 million for the largest offshore turbines, with total project costs varying significantly based on size, ...



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## How Much Does A Wind Turbine Blade Cost? A Complete Guide

So, how much does a wind turbine blade cost? The answer ranges from hundreds of thousands to several million dollars per blade, depending on size, materials, and application.



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## How Much Do Wind Turbine Blades Cost?

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## How Much Are Wind Turbine Blades

A typical wind turbine blade can cost around \$154, 000 (NREL), including materials, labor costs, and maintenance. The initial purchase cost is around half of this total, at \$73, 600.



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