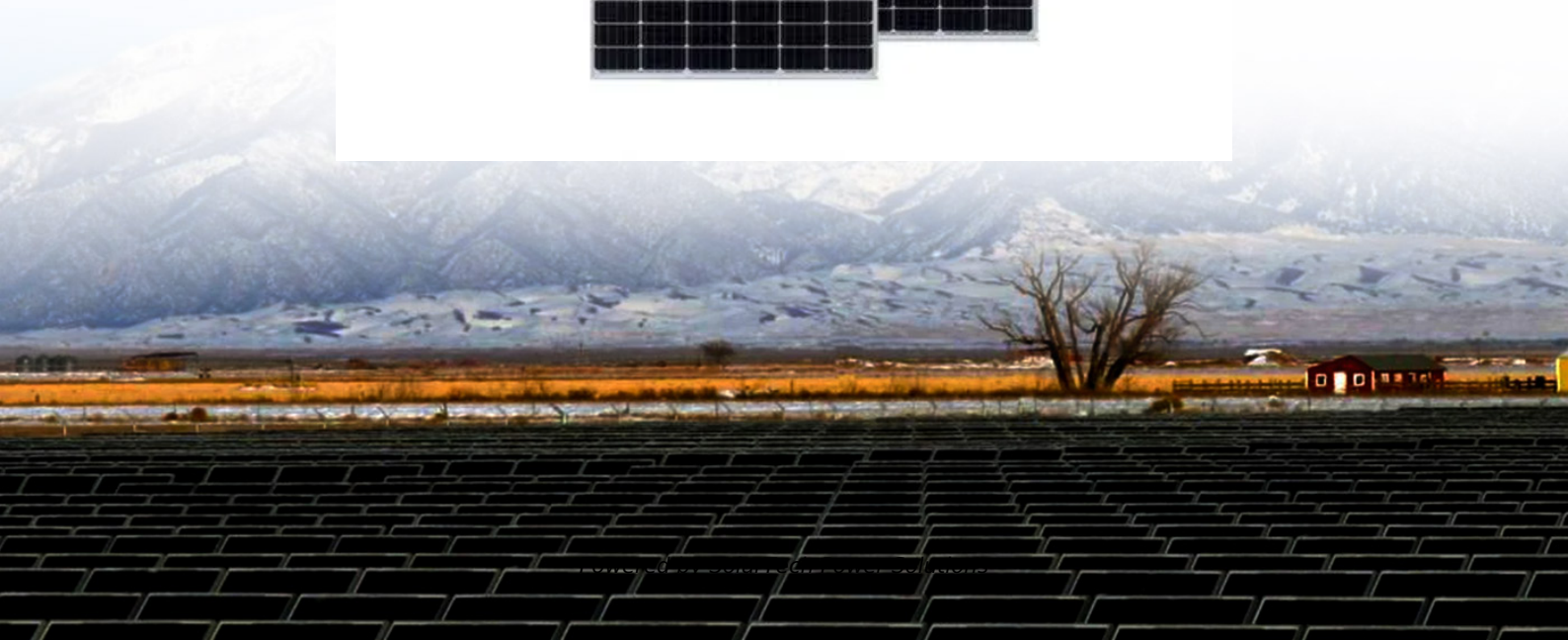


## SolarTech Power Solutions

**How much electricity does the  
base station wind power source  
consume**



## Overview

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How much energy does a wind turbine produce?

There are over 70,000 utility-scale wind turbines installed in the U.S. Based on a standard capacity factor of 42%, the average turbine generates over 843,000 kWh per month. However, there's no black-and-white answer to how much energy a wind turbine produces, as energy output varies depending on turbine type and location.

How much energy does a commercial wind farm produce?

Commercial wind farms rely on utility-scale 1MW turbines. A typical 1MW wind turbine generates about 3 million kilowatt hours of electricity yearly. A 1MW turbine at full capacity produces 1 megawatt-hour (MWh) of energy per hour. Ground capacity factors usually range between 25-40%.

How many kilowatts can a wind turbine power a home?

A single onshore wind turbine that can handle 2-3 megawatts pumps out about 6 million kilowatt hours (kWh) of electricity each year. This much power keeps roughly 1,500 average homes running [-3] [-4]. GE's huge Haliade-X 13 MW offshore turbine shows even more impressive numbers – one spin of its blades can power a UK home for over two days.

How much power does a 95 kW wind turbine produce?

A 95 kW turbine's maximum potential output reaches 832,200 kWh annually ( $95 \text{ kW} \times 8,760 \text{ hours}$ ). If it actually produces 250,000 kWh, its capacity factor equals 30%. U.S. wind turbines typically achieve 32-34% capacity factors. Projects built between 2013-2021 reached 40%.

What percentage of NSW Electricity is produced by wind turbines?

NSW coal-fired power stations convert 29% to 37% of the coal into electricity, and NSW gas plants convert 32% to 50% of gas processed into electricity. Wind turbines convert around 45% of the wind passing through the blades into

electricity (and almost 50% at peak efficiency)<sup>6,7</sup>.

How many homes can a wind turbine serve?

So, based on the statistics above, utility-scale wind turbines generate enough electricity to serve 46 million American homes, with individual turbines serving between 300 and 600 homes each.

## How much electricity does the base station wind power source consume?

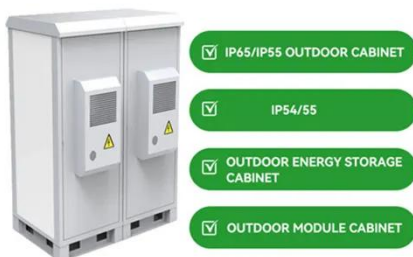


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## Energy consumption in

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