



## What is home wind power?

Small wind turbines have been powering America for generations. Early colonists used windmills to grind grain and cut wood. Cheap metal ones pumped water and generated electricity on farms and ranches. Today's tiny turbines, packed with electronics, capture far more energy, at a lower cost, than ever before. They range from 1-kilowatt units providing backup power for a cell tower to 100-kilowatt turbines capable of powering the equivalent to the electricity consumption of about 40 U.S. homes.

## Why size matters for wind

The reason is simple: The bigger the turbine, the more electricity it generates. Winds blow strongest high off the ground. Since power increases as a cube of wind velocity, if you double wind speed, you get eight times more energy. And longer blades extract more energy from the wind, even at low speeds. Yet new technology and incentives like those in the Inflation Reduction Act may be ushering in the age of small wind.

## Small wind is finally competitive

Nearly 1,400 gigawatts, more than half of the nation's current annual electricity consumption, could be built profitably today with small wind turbines. The greatest residential potential is in New York, Minnesota, Kentucky, Texas, Oklahoma and South Dakota, but wind makes sense for millions of people. (Here's an Energy Department spreadsheet model to help you run the numbers).

Bergey Windpower, which sells a next-generation turbine with just two moving parts, says the company can now compete with solar. "That's been the dream for 50 years," says Mike Bergey. "We've been in business for 45 years and this is the best clean energy environment in America we've ever seen, by a long shot."

Did small wind work for me?

Not quite. Manufacturers like Bergey recommend wind turbine owners have at least 2 acres, average winds above 12 mph, and high utility bills to make the math work. No dice for a city dweller like me.

But I'm still getting into the wind business

Community wind projects allow anyone to benefit from cheap wind power in their vicinity. So, I've set my sights higher. A consortium of California community power buyers is considering financing its own offshore wind farm not far from my home.

When it does, I'll be sure to get a piece of it.

Climate Coach from The Washington Post