

When green energy isn't so green: Retiring worn-out wind turbines is a wasteful process

Those spinning blades on the horizon aren't as green as you may think

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Wind energy has a big waste problem.

A story from [Harvest Public Media](#) delved into what happens when those big turbines that dot horizons all over the United States reach the end of their usefulness and have to be scrapped.

As it turns out, most of the wind turbine's structure can be sold or recycled, but the blades — which are made of a mix of fiberglass and resin — cannot.

"These towers may be supporting as much as 150,000 pounds, 250 feet in the air," Rob Van Vleet — who is in the process of scrapping a wind farm in Kimball, Nebraska. "The stands are an inch and a half thick steel ... so they're very strong."

But, Van Vleet add, "The blades are kind of a dud because they have no value."

To make things worse, the United States will have to figure out what to do with an estimated 720,000 tons of blade material over the next two decades, according to the report.

And how are the blades disposed of? The answer is cumbersome and costly. Because the parts are hundreds of feet long, they have to be cut up on site and then hauled away on special equipment just to get them to a landfill. And the difficulties continue after the blade parts are on the trucks.

"If you're a small utility or municipality and all of a sudden hundreds of blades start coming to your landfill, you don't want to use up your capacity for your local municipal trash for wind turbine blades," Van Vleet explained to the outlet.

One of the few landfills in the country big enough to accept wind farm waste is in Casper, Wyoming, the HPM story says. Initially, they tried to crush the blades but realized that they would have needed to upgrade to crushing equipment meant for mining in order to do so effectively. So the team there settled on cutting the blades up and stuffing the pieces inside each other.

Meanwhile, in South Dakota, local officials have had to clamp down on their local dump taking in blades from two wind farms in Iowa because the process of disposing them was such a drain on resources, according to the [Sioux Falls Argus-Leader](#).

"We can't take any more unless they process them before bringing them to us," Sioux Falls Public Works Director Mark Cotter told the paper. "We're using too many resources unloading them, driving over them a couple times and working them into the ground."

This isn't just an American problem, either. A 2018 [report](#) at Deutsche Welle details Germany's challenges with disposing of decommissioned turbine parts. The European country had about 28,000 turbines at the time; over 10,000 of those turbines are old and will have to be decommissioned by 2023.

The waste issue just adds on to the list of downsides to wind energy. Among others are the [unreliability of the power source](#), [hazards to wildlife](#) posed by the rotating blades, [noise pollution](#), and their aesthetic effects on the areas that have them.