

Wind turbine transforms into tiny house

Living in a used wind turbine? As of today it is possible. Vattenfall and design studio Superuse converted a nacelle, the top part of a wind turbine, into a tiny house. The nacelle, which is four metres wide, ten metres long and three metres high, was part of an Austrian wind farm for 20 years. With this tiny house, Vattenfall wants to demonstrate that components of decommissioned wind turbines can be reused in innovative ways. The tiny house is on prominent display during Dutch Design Week, which started last weekend.

Standing outside, it is clear to see that the tiny house once was part of a wind turbine. However, inside everything has been converted for a comfortable and homely stay. The tiny house has a kitchen, bathroom and living space. Moreover, the house is equipped with smart features such as a heat pump, solar panels and a solar water heater.







Reuse instead of remelting

In the coming decades, thousands of wind turbines will be decommissioned or replaced. Most parts of a wind turbine - the foundation, tower, gearbox parts and generator - are made of metal or concrete and therefore easily recyclable. Steel, for instance, can be melted down and reused, but the downside is that this takes a lot of energy and creates emissions. It would be better if the materials could be reused with as little processing as possible. Last year, Vattenfall invited four design firms to come up with ideas for a second life for wind turbines that have reached the end of their working life.

Thomas Hjort, Director Innovation Vattenfall, said:

"We are looking for innovative ways in which you can reuse materials from used turbines as completely as possible, making something new from them with as few modifications as possible. That saves raw materials, energy consumption and ensures that these materials are going to be useful for many years after their first working life."

Perspective and challenge for dismantlers

The tiny house was designed by Superuse and executed by Blade–Made and Woodwave. Superuse opted for the most difficult solution: designing a building code-compliant house in the smallest possible nacelle. The nacelle used comes from a V80 2MW turbine, the first model with a nacelle large enough for a tiny house. Nacelles from later turbines often offer much more space. Despite its limited size, the tiny house complies with the building code and is therefore fully usable for habitation, or holiday use.

Jos de Krieger, partner Superuse and Blade-Made:

"spread around the world, there are at least ten thousand nacelles of this generation available. Most of them have yet to be decommissioned. This offers perspective and a challenge for owners and decommissioners. If it is possible to develop such a complex structure as a house, then numerous simpler solutions are also feasible and scalable." In collaboration with Reliving.nl, the tiny house is furnished with sustainably produced and second-hand furniture, including a table that incorporates material from a recycled wind turbine blade. The electrical installation was installed by Vattenfall subsidiary Feenstra.

About the nacelle

The nacelle used for the tiny house was taken from a Vestas V80, 2MW turbine installed at the Austrian Gols wind farm in 2005. During 20 years of faithful service, standing at a height of 100 metres, the turbine produced 73GWh of electricity, which is enough to power more than 29-thousand Dutch households for a year. Dutch company Business in Wind decommissioned the wind farm and made the nacelle available for this project.

Tiny House at WindEurope's Annual Event in Copenhagen:

Vattenfall Tiny House - WindEurope Annual Event 2025

About Vattenfall

Vattenfall is a leading European energy company, which for more than 100 years has electrified industries, supplied energy to people's homes and modernised people's way of living through innovation and collaboration. We work to enable the fossil freedom that drives society forward. We are committed to building a future where everyone can choose fossil free ways to move, make and live. Our goal is net zero emissions in our entire value chain by 2040 at the latest. We employ approximately 20,000 people, have around 14 million customers and operate mainly in Sweden, Germany, the Netherlands, Denmark and the UK. Vattenfall is fully owned by the Swedish state. For more information: Fossil freedom - Vattenfall

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