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BloombergNEF highlights advantages of alternative wind turbine towers

Wooden wind turbine towers are easy to transport and assemble, in addition to having low embedded emissions and stable raw material prices. This can be read in a recently published report by BloombergNEF on how the material demand of wind power can be lowered.

"Modvion enables carbon neutral wind power, while lowering costs and simplifying transportation of tall wind turbine towers. It is a sign of strength that Bloomberg recognizes the potential of building wooden wind turbine towers," says Otto Lundman, CEO of Modvion AB.

In the report "35 MW Wind Turbines to Lower Material Demand" published in October 2020, BloombergNEF analyzes the global wind power market up until 2050 and how its material demand could be reduced. In the chapter focused on wind turbine towers a comparison of building wind turbine towers in steel, concrete and wood is included.

According to BloombergNEF, the advantages of wooden wind turbine towers include low embedded emissions, low weight, ease of transportation, fast assembly, and low volatility in raw material prices. The disadvantages are the lack of in-field experience and established supply chain.

"We are currently building our first commercial wooden wind turbine tower and at the same time developing the supply chain together with our strategic partners. We believe that wooden towers certainly will be a great part of the next generation of wind power," says Otto Lundman.

Modvion's first wooden tower was erected on the island of Björkö outside Gothenburg in April 2020 together with the Swedish Wind Power Technology Centre and Chalmers University of Technology. In 2022 Modvion will install the first commercial wooden tower, more than 100 meters tall, for the local electric utility company Varberg Energi. Furthermore, Modvion has signed letters of intent for wind turbine towers with international power company Vattenfall and Rabbalshede Kraft.

Pros and cons of wind turbine towers in wood, steel, and concrete:

- **Wooden towers, advantages:** Low embedded emissions, lightweight – easy to transport and fast assembly, low volatility in raw material prices.
- **Wooden towers, disadvantages:** Lack of in-field experience, no established supply chain
- **Steel towers, advantages:** Established supply chain, high strength, recyclable.
- **Steel towers, disadvantages:** High embedded emissions, high volatility in raw material prices, large diameters difficult to transport.
- **Concrete towers, advantages:** Local manufacturing, flexible design, high stiffness, low volatility in raw material prices.
- **Concrete towers, disadvantages:** High embedded emissions, heavy – slow assembly and transportation challenges.

Source: BloombergNEF, summarized by Modvion.

For more information

The report "35 MW Wind Turbines to Lower Material Demand" is available to BNEF subscribers. A previous article from Bloomberg Green about wooden towers can be found [here](#).

Facts on wooden wind turbine towers

Modvion's wooden wind turbine towers are built as modules and assembled on site. The lower weight of the wood and the modular concept make it possible to build taller towers, the sections of which can be more easily transported by road. By weight, the wooden construction is stronger than steel and can be built at a significantly lower cost. The carbon dioxide absorbed by the trees during their growth period remains stored in the wooden tower, facilitating climate-neutral wind energy.



For questions and answers about wooden wind turbine towers, please see this [FAQ](#).

For further information, please contact:

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Press photographs of Modvion and Otto Lundman are available [here](#).

About Modvion

The Swedish wood technology company Modvion develops demanding designs for large-scale applications in laminated wood – nature's own carbon fibre. By replacing emission-intensive materials such as steel and concrete, wooden structures offer radical reductions in greenhouse gas emissions. The company's current focus is on wind turbine towers, where Modvion's patented module system offers reduced manufacturing costs and more efficient transportation of high towers to installation sites.

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