



UK rare-earth-free innovator GreenSpur receives generator order from US firm Wind Harvest

The delivery of three patented 70kW rare-earth-free generators in mid-2022 will support Wind Harvest's vertical axis wind turbine design ambitions.

UK firm GreenSpur Wind has confirmed an order for three 70kW rare-earth-free permanent magnet direct drive generators to Wind Harvest of the United States. The transaction represents a first US sale for GreenSpur. Its unique ferrite-based generator technology eliminates the need for costly and supply-constrained rare-earth magnets. The order is subject only to the success of Wind Harvest's [current funding campaign](#).

Davis, California-based [Wind Harvest](#) has a unique vertical axis wind turbine design that operates below and around larger propeller-type turbines, increasing energy production. The opportunity for its innovative technology is huge, with Wind Harvest estimating a potential market size in existing wind farms of 140GW which would mean a \$280+bn global opportunity.

An international shortage of rare-earth magnets is looming as China (accounting for 70% of global supply) uses quotas to preserve its own supplies. The price of rare-earth magnets – a key component in most wind turbine generators and electric vehicles – doubled over the last year. The market for rare-earth magnet production has been further hampered by China's recent power shortages while surging commodity prices increase material costs further.

GreenSpur offers a rare-earth-free generator to the wind industry. Announcing the GreenSpur sale, Andrew Hine the Commercial Director stated: "We have been working with UK Government and wider supply chain support to develop a generator technology that can remove rare-earth risk. Wind Harvest has recognized a strategic advantage of eliminating this risk. In recent months, we have optimized a 70kW generator design specifically for Wind Harvest's H-type turbines and are pleased with the subsequent order that we announce today."

Confirming the order, Kevin Wolf, Wind Harvest CEO, added: "We have ambitious expansion plans that benefit greatly from avoiding the use of generators that rely on Chinese rare-earth magnets. GreenSpur's larger and ultimately less costly ferrite generators work well in our 10-20m tall wind turbine towers. Our engineers have worked closely with GreenSpur to produce an optimized design. We are pleased with today's announcement and see this as the start of an enduring commercial and technical collaboration."

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