

News release from Vestas Wind Systems A/S and Northvolt AB

15 December

Vestas and Northvolt partner on battery storage for wind energy to support the further integration of renewables

Sustainable energy leader Vestas and battery manufacturer Northvolt today announced a technology collaboration on the development of a lithium-ion battery platform for Vestas power plants. As an initial phase of the partnership, Vestas is investing EUR 10 million.

With renewable energy generation now cost-competitive with electricity produced from fossil fuels, significant challenges remain in how to integrate renewable energy into power grids and systems, as renewables cannot always match supply with demand.

The solution to solving this challenge is storing renewably-generated electricity so it can be provided when needed. Battery storage is a key technology to support the large-scale integration of renewable energy into energy systems and to speed up the transition from fossil fuels to renewable energy. In this context, providers of both wind energy technologies and battery technologies are looking for ways to accelerate this integration.

With the support of Northvolt, Vestas is looking to bring the most competitive and sustainable hybrid storage solutions to the market and to better integrate storage and renewable energy generation technologies as a means to meet broader industry challenges and increase the uptake of more renewables. This is being done both through existing research and development, and by combining it with unique competencies and experiences of new partners. In this way, Northvolt will become a part of Vestas' hybrid supplier ecosystem.

Northvolt, with the support of Vestas, is looking to better understand the needs of the renewable energy sector in order to develop batteries for solution providers and OEMs. Northvolt is building a next generation battery factory with the aim to produce the world's greenest batteries to enable and accelerate the transition to renewable energy.

"This important collaboration with Northvolt will enable Vestas to define, challenge and improve battery storage offering for customers that need hybrid and storage solutions," says Vestas' Chief Technology Officer Anders Vedel. "There is a strong shared purpose and strategic fit with Northvolt that will support our goal to expand our knowledge in an area that we know will only grow in importance to the renewables and overall electricity market."

"Vestas is a true global leader in enabling the world's transition to renewable energy. Batteries and solutions for energy storage are key in this transition, and Vestas will be an important strategic partner for Northvolt as we establish our product offering to the renewable energy sector," says Peter Carlsson, Co-Founder and CEO of Northvolt.

The two technology leaders are aiming to create and optimise a means to integrate battery storage solutions into wind turbines and full power plant system design in order to:

- Enable Vestas to ensure more certainty and predictability in power output for greater grid stability and compliance with emerging grid requirements
- Develop and optimise control systems that can integrate battery storage systems with other renewable energy technologies.

Battery costs have been traditionally too high for wide-scale use, but adoption of batteries for energy storage will increase dramatically when the costs drop and create a more attractive business case for renewable energy and storage than that of traditional fossil fuels. This collaboration also aims to develop data management systems for real-time operation data and to ensure integration and continuous optimisation on overall product design and asset lifetime.

Over the next seven years, the partnership will see Vestas and Northvolt contribute to the joint development project through a combination of dedicated staff, project resources and shared development efforts. To support the initial phase of the partnership, Vestas will invest EUR 10 million towards joint R&D and product development, as well as the establishment of Northvolt's demonstration line and research facility, Northvolt Labs, which will be used to test and qualify products and processes.

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About Vestas

Vestas is the energy industry's global partner on sustainable energy solutions. We design, manufacture, install, and service wind turbines across the globe, and with 87 GW of wind turbines in 76 countries, we have installed more wind power than anyone else. Through our industry-leading smart data capabilities and unparalleled more than 73 GW of wind turbines under service, we use data to interpret, forecast, and exploit wind resources and deliver best-in-class wind power solutions. Together with our customers, Vestas' more than 22,700 employees are bringing the world sustainable energy solutions to power a bright future.

About Northvolt

Northvolt was founded in 2016 with the mission to build the world's greenest battery, with a minimal carbon footprint and the highest ambitions for recycling, to enable the European transition to renewable energy. Northvolt's team of experts is building the next generation battery factory focused on process innovation, scale and vertical integration. Once completed, it will be Europe's largest battery factory and produce 32 GWh worth of battery capacity annually.

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