

NR. 46/2024

# Hannover Messe 2024: Pioneering Research Project – Charging Electric Vehicles with Wind Energy

- Volkswagen Group Charging (Elli), EnerKite, TU Braunschweig, and other project partners are researching an energy-autonomous charging solution for e-mobility.
- High-tech kites harvest high-altitude winds and convert them into electricity, which can be stored in innovative battery systems and used to charge EVs.
- Federal Minister Stark-Watzinger: "Strong network of competencies for the energy transition."

**Hanover, April 22, 2024 - Volkswagen Group's subsidiary Elli, airborne wind turbine manufacturer EnerKite, and the Technical University of Braunschweig present groundbreaking research at the Hannover Messe, which could enable energy-autonomous charging for electric vehicles in the future. High-tech kites "harvest" strong and steady high-altitude winds, converting them into electricity. The energy is stored in Elli's Flexpole fast-charger and can be used to charge EVs. The project is funded by the Federal Ministry of Education and Research and coordinated at the Open Hybrid LabFactory Campus in Wolfsburg.**



Federal Minister of Education and Research Bettina Stark-Watzinger at Hannover Messe 2024 in conversation about the Techno-Hyb project. Rights holder: Volkswagen Group

During her visit to the Hannover Messe, Federal Research Minister Bettina Stark-Watzinger learned about the cooperation project between science, industry and the start-up scene, whose research approach could solve a major problem for e-vehicle users in remote regions of the world and has enormous potential for the diversification of energy generation and charging infrastructure.

Renewable energy sources are volatile, leading to higher costs for storage systems and network infrastructure. The collaboration between EnerKite's base-load-capable airborne wind turbines and Elli's charging and storage technology enables grid-independent and constant power supply, even in remote regions. The new Elli Flexpole can be easily and flexibly installed as a fast-charging station and connected to the low-voltage grid thanks to its integrated battery system, without the need for a special transformer or expensive construction work. "We are pleased that our already market-available Flexpole can support this groundbreaking initiative to redefine the limits of

electromobility. By combining innovative technologies, we can make a sustainable contribution to the mobility of the future," explains Mark Möller, Chief Technical Officer of Volkswagen Group Charging (Elli).

"EnerKite systems provide constant power, converting green energy into a reliable source of electricity. With a yield four times higher than conventional wind turbines with the same power, EnerKite presents an outstanding alternative. This opens up new possibilities for decentralized energy supply and supports the spread of electromobility in regions that were previously difficult to access," explains Florian Breipohl, CEO of EnerKite.

The innovation project "TechnoHyb" emerged as part of the BMBF Research Campus Initiative and is presented at the booth of the Federal Ministry of Education and Research at the Hannover Messe 2024, which takes place from April 22 to 26. In addition to Volkswagen Group Charging (Elli), EnerKite, and TU Braunschweig, the following project members were involved: FIT-Umwelttechnik, Fraunhofer Institute for Machine Tools and Forming Technology (among others).

For more information on the topic, visit [www.volkswagen.com](http://www.volkswagen.com), [www.elli.eco](http://www.elli.eco), <https://open-hybrid-labfactory.de/forschung-projekte/technohyb>, [www.enerkite.de](http://www.enerkite.de)

## **Julia Pirlich**

Volkswagen Group Charging GmbH (Elli)

Head of Corporate Communications

+49 (0) 175 3713564

[julia.pirlich@elli.eco](mailto:julia.pirlich@elli.eco) | [www.elli.eco](http://www.elli.eco) | [www.volkswagen-group.com](http://www.volkswagen-group.com)

## **Ilka Rhesa**

EnerKite GmbH

+49 30 9854077-18

[i.rhesa@enerkite.de](mailto:i.rhesa@enerkite.de)



---

## About the Volkswagen Group:

The Volkswagen Group is one of the world's leading car makers, headquartered in Wolfsburg, Germany. It operates globally, with 114 production facilities in 19 European countries and 10 countries in the Americas, Asia and Africa. With around 684,000 employees worldwide. The Group's vehicles are sold in over 150 countries.

With an unrivalled portfolio of strong global brands, leading technologies at scale, innovative ideas to tap into future profit pools and an entrepreneurial leadership team, the Volkswagen Group is committed to shaping the future of mobility through investments in electric and autonomous driving vehicles, digitalization and sustainability.

In 2023, the total number of vehicles delivered to customers by the Group globally was 9.2 million (2022: 8.3 million). Group sales revenue in 2023 totaled EUR 322.3 billion (2022: EUR 279.1 billion). The operating result before special items in 2023 amounted to EUR 22.6 billion (2022: EUR 22.5 billion).

## About Elli:

The Elli brand, with around 370 employees, takes care of customers' needs at the interface between energy and mobility. Elli, as part of the Volkswagen Group, offers a broad range of energy and charging solutions in Europe and acts as a mobility service provider. The current product portfolio includes charging solutions for private customers and companies – from the company's own home chargers and the flexible fast-charging stations (Flexpoles) to charging services and innovative smart green electricity tariffs. For charging in public spaces, Elli provides digital solutions and services for a seamless charging experience. Elli, which was founded in 2018, has offices in Berlin, Wolfsburg and Munich.

## About EnerKite

EnerKite provides cost-effective and base-load-capable wind energy. An ultra-lightweight wing, fully automated operation in strong and steady high-altitude winds, and ground-based energy generation ensure the highest energy yield among all green energy sources - twice as much power as wind turbines and five times as much as solar panels, reliably throughout the year, day and night. The airborne wind energy systems are easy to operate and ensure maximum availability and safety. EnerKite was founded by wind energy experts, aeronautical engineers, and kite enthusiasts. The company currently employs over 20 people in the Brandenburg-Berlin area and has already received funding from the EU, federal government, and the state of Brandenburg. EnerKite works closely with leading industrial partners and major energy companies to ensure rapid market entry and cost-effective global commercialization of the technology. The first sale of a system to a German medium-sized enterprise confirms market fit and marks the beginning of distribution.

<https://www.linkedin.com/company/enerkite> | <https://youtube.com/@EnerkiteDe>

<https://www.instagram.com/enerkite> | <https://www.facebook.com/enerkite>

## About Open Hybrid LabFactory (OHLF)

The BMBF research campus Open Hybrid LabFactory (OHLF) works on sustainable automotive production solutions with specific focus on lightweight and circular economy. The OHLF building provides 200 working places and a great shopfloor, where Volkswagen, TU Braunschweig and Fraunhofer-Gesellschaft cooperates with further scientific institutes and industry partners within a public private partnership. Unique research equipment with industrial scale machines and broad competences of the associated partners enable an integrated innovation process from scratch to the final product. In current research projects, battery systems from end-of-life electric vehicles are disassembled automatically or new parts from post consumer recycled plastics are produced, for example.