

Adaptive Balancing Power revolutionizes flywheel technology for high-performance energy storage and charging

Adaptive Balancing Power advances the international commercialization of its high-performance energy charging and storage systems for civil and defense uses

PFUNGSTADT, HESSE, GERMANY, April 4, 2024 /EINPresswire.com/ -- It is one of the recent great examples of German engineering: Dr Hendrik Schaede-Bodenschatz and his Adaptive Balancing Power (ABP) team has developed a new generation of an high-performance energy storage and charging system based on the kinetic energy flywheel principle. At the heart of this internationally patented system is a carbon fibre flywheel mass mounted in a vacuum, which rotates at up to 18,000 revolutions per minute and can accumulate, store, and release large amounts of energy quickly and reliably. The first units are already up and running in Germany, with production lines now to be scaled up.



Adaptive Balancing Powers MD Dr Hendrik Schaede Bodenschatz standing in front of one of ABP's revolutionary high-performance flywheel energy storage and charging system.

Reliable, efficient, and sustainable kinetic energy storage and charging systems

ABP's high-performance systems are extremely robust, reliable and versatile. The ABP Amperage System for e-mobility including DC rail-systems, for example, delivers up to 350 kW of total power at the touch of a button with a long service life of one million charging cycles – all that at a fraction of the carbon footprint of a battery storage system.

“We develop energy storage and charging solutions that are as simple, effective, and robust as possible, without being susceptible to disruptions in the global supply chain.” says Managing Director Schaede-Bodenschatz, who before founding ABP led a research group at the renowned Technical University of Darmstadt in Hesse, Germany and worked as a visiting scientist at the

Alaska Center for Energy and Power at the University of Alaska. "In fact, we have succeeded in developing a very advanced system with standard components that are readily available in the German and European engineering industry."

The range of possible applications is immense: electric cars, trucks and even ferries can be re-charged in just a few minutes - even in places where there is no proper charging infrastructure due to network constraints. [E-buses](#) for example double their range by re-charging within 150 seconds during regular stops. They accommodate more passengers and are much cheaper to purchase and operate, as the battery packs can be significantly smaller.



Adaptive Balancing Power Headquarter in Pfungstadt Germany c ABP

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Fast installation and easy adaption for grid stabilization and micro grid management

ABP's energy storage and charging systems are designed for scalable and fast installation. In the context of [EV high-performance charging the storage systems](#) even work without a power transformer, reducing investments and total cost of ownership (TCO) dramatically. The technology can also be adapted easily for grid scale energy storage installations, critical infrastructure such as [micro-grids](#), hospitals, or in the defense sector as well as for industrial DC-grids and DC rail transportation systems.

“So far, we have installed our systems in Germany. The first international projects are in the pipeline and we want to use this momentum to further strengthen our international partner and client relations.”, says Schaede-Bodenschatz.

About Adaptive Balancing Power: Adaptive Balancing Power GmbH (ABP) is a leading energy storage and charging technology company based in Hesse Germany that enables the rapid and nationwide expansion of the charging infrastructure with high-performance charging stations for electric cars, buses, and trucks. With its self-developed storage and charging systems, the company offers high-performance technology that is quick and easy to integrate enabling charging cycles of just a few minutes instead of hours with an output of up to 350 kW, even at

locations that are not connected to power lines designed for fast charging. ABPs technology solutions can also be used to stabilize micro grids, for recuperation or for use in the field of uninterruptible power supply for server rooms, financial companies, hospitals and for defense systems. Visit us:

<https://www.adaptive-balancing.de/>

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Visual of a ABP flywheel energy storage system c
ABP

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