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## EES EUROPE TREND PAPER DRIVERS OF THE PORTABLE BATTERY STORAGE MARKET

**Munich/Pforzheim, January 2024 – Electricity anytime, anywhere: More and more customers are showing interest in portable battery storage systems. Among them are homeowners, tenants, campers and people who organize outdoor events with no grid-supplied power. This trend is gaining momentum around the world thanks to the growing demand for flexible electricity storage systems – especially in countries where outdoor culture is flourishing.**

In countries with an unreliable grid infrastructure or high energy costs, such as the USA, Japan and a number of European countries, there is a great demand for solutions in form of portable energy buffers. People yearn for independence and greater self-sufficiency outside their own home. "In the last three to four years, we've seen an increase in the popularity of portable outdoor storage systems, off-grid applications and balcony solar systems," EcoFlow spokesperson Magda Teresa Partyka states. A recent study by The Business Research Company confirms this development. According to the study, the global market for portable electricity storage systems is projected to grow from 3.8 billion US dollars in 2022 to 4.1 billion US dollars in 2023 and 5.3 billion US dollars in 2027.

### Portable storage systems are attractive for many users

This trend is driven by several factors: More and more people want to be able to use electricity when they are outdoors, on vacation or in the garden. As a result, the demand for compact and light electricity storage systems is increasing. What is more, a growing number of households are getting their own solar systems, making this technology more popular, including small solar systems for balconies. And thanks to their flexibility, portable storage systems are a great addition to complete the package. They are easy-to-use and versatile, which makes them attractive for many users.

But they are not competing with stationary residential storage systems. While stationary systems have a significantly higher capacity and have been developed in part as emergency power supply, portable storage systems are designed for outdoor use or to make users independent from the grid. However, the line between portable solutions and stationary residential storage systems is becoming increasingly blurred. "With the EcoFlow ecosystem, for example, users can start with a portable solution and later upgrade it to a residential storage system, as capacities and usage scenarios are constantly growing," explains Partyka.

### Homegrown electricity: Is it worth using portable storage systems in combination with balcony solar systems?

Balcony solar systems are becoming increasingly popular because they are an easy way to generate your own solar power. Also known as mini PV, plug-in PV or plug-in solar devices, this application is popular because it allows homeowners and tenants to become more independent of high energy prices, and it is relatively inexpensive compared to roof-top solar installations. Those who also want to make use of excess solar power should consider a portable storage system, as it can increase self-consumption and is easy to install. Many manufacturers are already offering package deals that combine plug-in solar devices with portable storage systems.

The German Association for the Promotion of Solar Energy SFV is following this development with great interest. "However, we're skeptical about some products and what they promise to deliver," says Tobias Otto of SFV. It is rare for today's storage devices to pay off over the service life of a balcony solar system. Mini storage systems cost about 1,000 to over 2,000 euros.

They typically take 20 years to pay for themselves, but storage systems generally only last 10 to 15 years, Otto reports. In winter, the electricity from the balcony solar system is often not enough to cover the household's demand, let alone charge the battery. What is more, the discharge rating of many storage systems cannot be adjusted to the actual consumption of the household. Another problem: Charging and discharging low-voltage batteries results in efficiency losses of 20 to 40 percent, depending on the manufacturer. Homeowners and tenants can find out whether it is worth using a portable storage system with the [plug-in solar calculator](#) by the Solar Storage Systems research group of the German University of Applied Sciences HTW Berlin.

#### **Lack of market transparency: no obligation to register portable storage systems**

It is difficult to get hard numbers on the portable storage system market in Germany, because many users don't register their devices. According to the German core energy market data register MaStR, some 364,500 storage system commissions have been registered for 2023. 2,230 of these devices have a usable storage capacity of less than three kilowatt hours, making up only a fraction of the total number of devices with less than one percent. However, there is no obligation to register portable storage systems. "Due to the high number of installed balcony solar systems, more and more small portable lithium storage devices are being put on the market," explains Hanna Schmole, Director Research Operation at EUPD Research. Although balcony solar systems are required to be registered with the MaStR, the market analyst believes there is a large number of unregistered installations.

#### **Portable battery storage systems at ees Europe 2024**

In spite of the aforementioned cons, portable storage systems are still high in demand thanks to their flexibility. They are used to complete private balcony solar systems, when traveling, for outdoor events or in gardens. From June 19–21, 2024, the ees Europe will present the latest technologies and trends in the area of portable battery storage systems in Munich. Visitors will have the opportunity to learn more about the latest innovations and developments and new fields of application for portable battery storage systems from numerous exhibitors on site. A session on Portable Storage Systems will take place on Friday morning, June 21, 2024 in the ees Forum (hall C2, booth C2.230), rounding off the program. Aimed at distributors and installers, it will examine the applications, the pros and cons and the economic viability of portable storage systems.

#### **For more information, please visit:**

[www.ees-europe.com](http://www.ees-europe.com)

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