



SMA Solar Technology AG press release

SMA Home Storage Solution claims top spot in HTW Berlin's energy storage inspection

Niestetal, July 9, 2025 - The [SMA Home Storage Solution](#) ranks among the most efficient home energy storage systems on the market. During the most recent energy storage inspection at the Berlin University of Applied Sciences (HTW), the SMA system in the up-to-5 kW power class achieved a System Performance Index (SPI) of 92.8%. This achievement positions SMA at the top of its power class for hybrid inverters (DC-coupled systems) up to 5 kW, setting a new record with the highest value recorded to date.

"SMA not only delivers innovative technologies but also provides complete solutions that are perfectly harmonized to deliver measurably more energy," said Marcus Spickermann, Executive Vice President of the Home & Business Solutions division at SMA. "Our users benefit directly—through greater energy independence and maximum efficiency. It's fantastic to see this officially confirmed. We're absolutely thrilled and highly motivated by this top result for our Home Storage Solution in HTW Berlin's renowned energy storage inspection."

Independent evaluation by HTW Berlin

HTW Berlin's energy storage inspection ranks among the most important independent studies on the efficiency of residential PV storage systems across the DACH region. As part of the study, battery storage systems for private households are regularly tested under real-world conditions and assessed for their energy efficiency.

The SMA Home Storage Solution, which includes the hybrid inverter Sunny Boy Smart Energy 5.0, the SMA Home Storage 6.5 lithium-ion battery, and the SMA Energy Meter, has now been added to the Stromspeicher-Inspektor web app. It achieved a System Performance Index of 92.8%, which is currently the highest efficiency rating among hybrid inverters (DC-coupled systems).

Efficiency meets everyday functionality

With its wide input voltage range and three MPPT trackers, the hybrid inverter [Sunny Boy Smart Energy](#) is ideally suited for complex roof layouts. Thanks to cutting-edge silicon carbide technology (SiC MOSFETs) and specially developed, patented components in its power electronics, the inverter delivers outstanding efficiency. Built-in performance reserves enhance operational reliability and, when combined with the optional SMA Backup Solution, provide a powerful backup power supply—even during a power outage.



The [SMA Home Storage Battery](#) stands out for its low standby losses and sturdy construction, providing a reliable foundation for long-term use. Thanks to its modular design, the storage capacity can be flexibly expanded and individually adapted to each household's energy needs.

The [SMA Energy Meter](#) precisely measures household energy flows at 200 ms intervals, enabling ultra-fast, low-loss control—perfectly optimized to ensure seamless interaction between the PV system, battery, and loads.

Here's the link to the HTW Berlin article (available in German only): [Heimspeicher-Ranking der HTW Berlin: Neue Spitzenreiter in der 5-Kilowatt-Klasse | HTW Berlin](#)

About SMA

As a leading global specialist in photovoltaic and storage system technology, the SMA Group is setting the standards today for the decentralized and renewable energy supply of tomorrow. SMA's portfolio contains a wide range of efficient PV and battery inverters, holistic system solutions for PV and battery storage systems of all power classes, intelligent energy management systems and charging solutions for electric vehicles and power-to-gas applications. Digital energy services as well as extensive services round off SMA's range. SMA inverters installed throughout the world within the last 20 years with a total output of approximately 144 GW help avoid the emission of more than 64 million tons of CO₂. SMA's multi-award-winning technology is protected by more than 1,600 patents and utility models. Since 2008, the Group's parent company, SMA Solar Technology AG, has been listed on the Prime Standard of the Frankfurt Stock Exchange (S92) and is listed on the SDAX index.

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