January 2024

Statistical data on the German Solar Battery Storage & E-Mobility Market

This data sheet gives an overview of the German market for solar battery storage systems and e-mobility at the end of 2023.

You can find free video and photo material, infographics as well as our press releases on

https://www.solarwirtschaft.de/presse/

Suggested citation

Unless stated otherwise, please use the following citation: German Solar Association (BSW-Solar) (2024): "Statistical data on the German Solar Battery Storage and E-mobility Market", Berlin.

Solar Battery Storage and E-mobility Market in Germany	at the end of 2023 (rounded)
New home solar battery storage systems installed in 2023[1]	573,000
Cumulative number of installed home solar power storage systems at the end of 2023[1]	1,197,000
Average capacity of installed solar power home storage systems in 2023[1]	8.8 kWh
Capacity of solar power home storage systems installed in 2023[1]	5.1 GWh
Share of new residual PV-systems installed with storage systems[1]	81%
Share of retrofits among newly installed solar home storage systems[2]	10%
Cumulative capacity of installed battery storage systems at the end of 2023[1]	12.6 GWh
Cumulative capacity of installed home solar power storage systems at the end of 2023[1]	10.2 GWh
Cumulative capacity of installed commercial storage systems at the end of 2023[1]	0.9 GWh
Cumulative capacity of installed mass storage systems at the end of 2023[1]	1.5 GWh
Fully electric vehicles (BEV) newly registered in Germany in 2023[3]	524,200
Additional electricity needed for 1 / 5 / 10 million electric vehicles respectively[4]	3 / 15 / 30 billion kWh
Additional installed PV-capacity required for 1 million electric vehicles[5]	3 GWp

[1] BSW-Solar, own estimates based on surveys and Marktstammdatenregister; preliminary values subject to revisions
[2] BSW-Solar, own survey: "BSW Speicherpreismonitor Deutschland"
[3] KBA (2024), see press release
[4] BSW-Solar, own calculation; assumptions: 15,000 km mileage per year, average consumption 20 kWh per 100 km mileage
[5] BSW-Solar, own calculation, for assumptions see footnote 4