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# **Eastern European power grid wind and solar energy storage**





## Overview

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Is battery energy storage a solution to Europe's energy crisis?

Europe is at the forefront of decarbonisation efforts, with already achieved results and ambitious goals for the coming decades, particularly in the power sector. However, the greening of the European electricity system also requires increasing flexibility. Battery energy storage systems (BESS) represent a crucial component of the solution.

How many megawatts does a battery storage system use in Germany?

PV plus battery storage led the way with 724 megawatts (MW), followed by onshore wind plus storage at 475 MW. According to SolarPower Europe, 11 percent of the 0.8 GW of large-scale battery storage systems totalling 1.1 gigawatt-hours (GWh) installed in Germany between 2021 and 2023 were combined with renewable energy plants, mainly solar parks.

Can solar & wind storage be combined at a single site?

The potential of combining solar, wind and storage at one site is clear. Regulation remains the main barrier, but some European countries are now showing how it's done. Combining solar and wind parks with large battery storage systems at a single site, otherwise known as co-location, offers several advantages.

Could a 5% battery capacity ensure optimal integration of PV in Europe?

A 5% battery capacity level could ensure optimal integration of PV in Europe. The varying level of RES curtailment could be handled by 5% battery capacity. Country heterogeneity is observed in the optimal level of batteries. Batteries can ease the strong cannibalisation effect of PV plants.



## Eastern European power grid wind and solar energy storage



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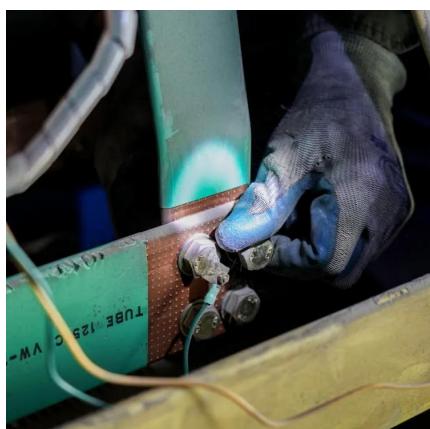
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