

Solar energy storage power supply emergency power supply





Overview

Can photovoltaic battery energy storage systems provide emergency power supply functionality?

The emergency power supply functionality of photovoltaic battery energy storage systems (PV BESS) is evaluated based on a case study, which comprises a single-family house in Germany with defined electricity load profile and installed PV BESS.

Which parameter limits the backup power functionality of PV Bess?

A parameter, which limits the backup power functionality of PV BESS, is the peak power of the battery storage system inverter. In case of a blackout, the supply of household electricity consumers is only possible if the household load is below the peak power of the inverter.

How many hours a backup power supply is possible?

During the complete year, for 5,426 hours (62% from total hours) a backup power supply from PV BESS is possible. Under the assumption of a blackout duration of 1 day, a complete coverage of the daily load from the PV BESS is possible for only approx. 40% of the days during the months from April to August.



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