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# **Solar energy storage power supply emergency power supply**





## Overview

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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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