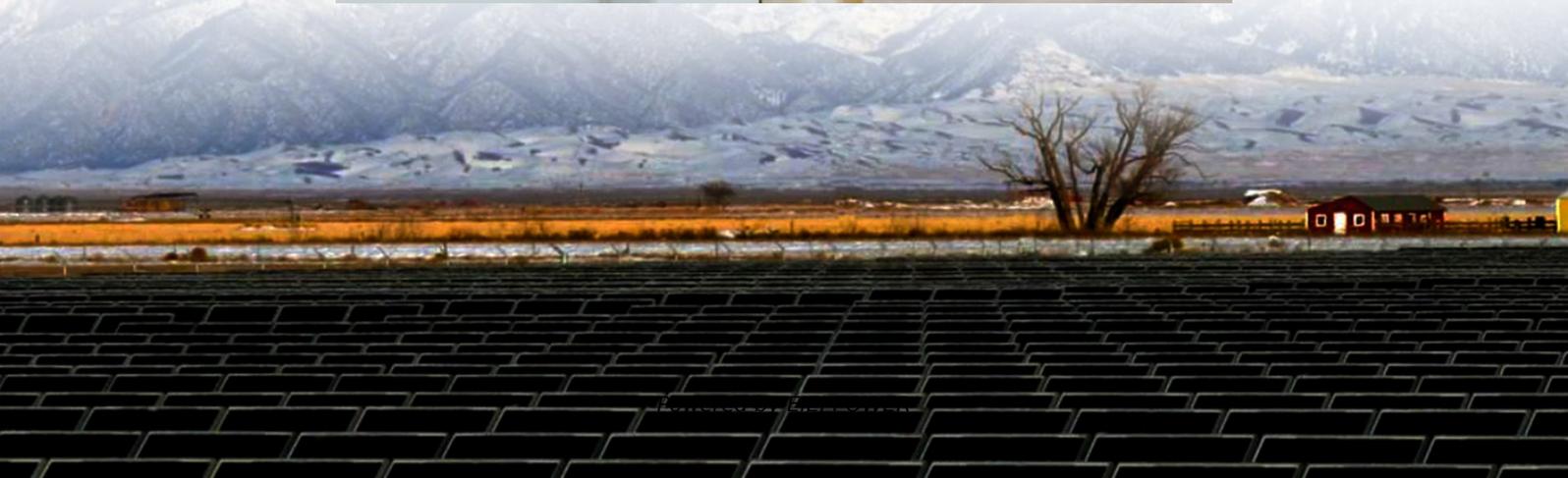


# **Transmission base station batteries to energy storage batteries**





## Overview

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How can a battery energy storage system improve transmission lines?

To bring more operational flexibility to transmission lines and comply with the electrical sector's digitalization trends, we propose implementing battery energy storage systems at transmission lines with the system's communication protocols and data modelling based on the IEC 61850 standard.

What are battery energy storage systems?

Battery energy-storage systems typically include batteries, battery-management systems, power-conversion systems and energy-management systems 21 (Fig. 2b).

Are battery energy storage systems a non-networked solution?

This paper investigates the integration of Battery Energy Storage Systems (BESS) as a non-networked solution, offering a timely and less expensive alternative to traditional network upgrades to address transmission bottlenecks in Great Britain (GB).

How does a battery energy storage system work?

The direct current generated by the batteries is processed in a power-conversion system or bidirectional inverter to output alternating current and deliver to the grid. At the same time, the battery energy storage systems can store power from the grid when necessary 24, 25.



## Transmission base station batteries to energy storage batteries

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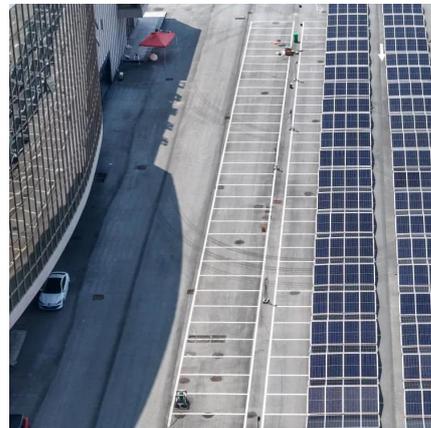


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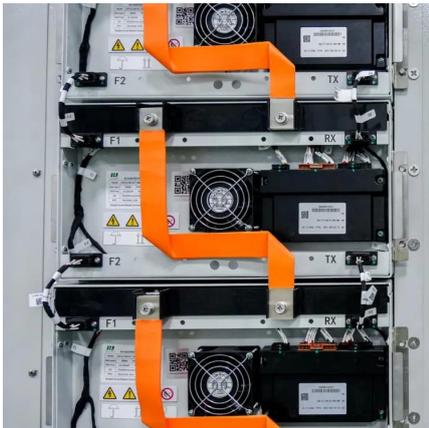


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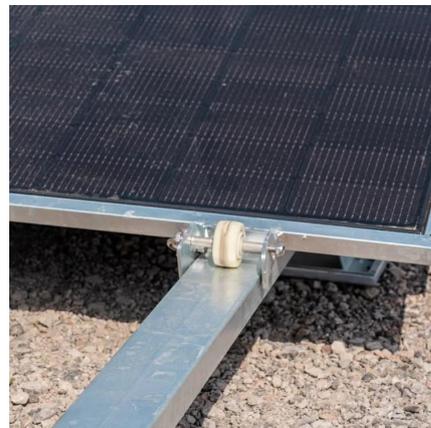


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