

Energy Storage Systems – a market overview

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Company & Speaker - Introduction

PV Tech, Solar Media & Informa

- PV Tech is a well-known brand within Solar Media.
- Solar Media has been part of Informa Markets since 2024, a division within Informa PLC.
- Informa PLC is an events, digital services & academic research group, LON:INF, FTSE 100, market cap. ca. \$12B*
- PV Tech have been covering bankability of suppliers since 2019 in the PV Space and we released the Battery StorageTech Bankability Ratings Report to do a similar thing in the ESS Space.

Moustafa Ramadan, PhD

- Head of Market Research, PV Tech.
- Joined PV Tech in 2025 and worked on the PV Bankability and Manufacturing report.
- Qualified in Energy Engineering (BEng, MEng), Energy Finance (MSc, PhD), Energy Law (LLM).
- Worked in large-scale solar development in the UK and Ireland, consulted on renewable energy projects across Africa and the Middle East.
- Completed Acquisition Due Diligence on over 100 renewable energy projects and portfolios.

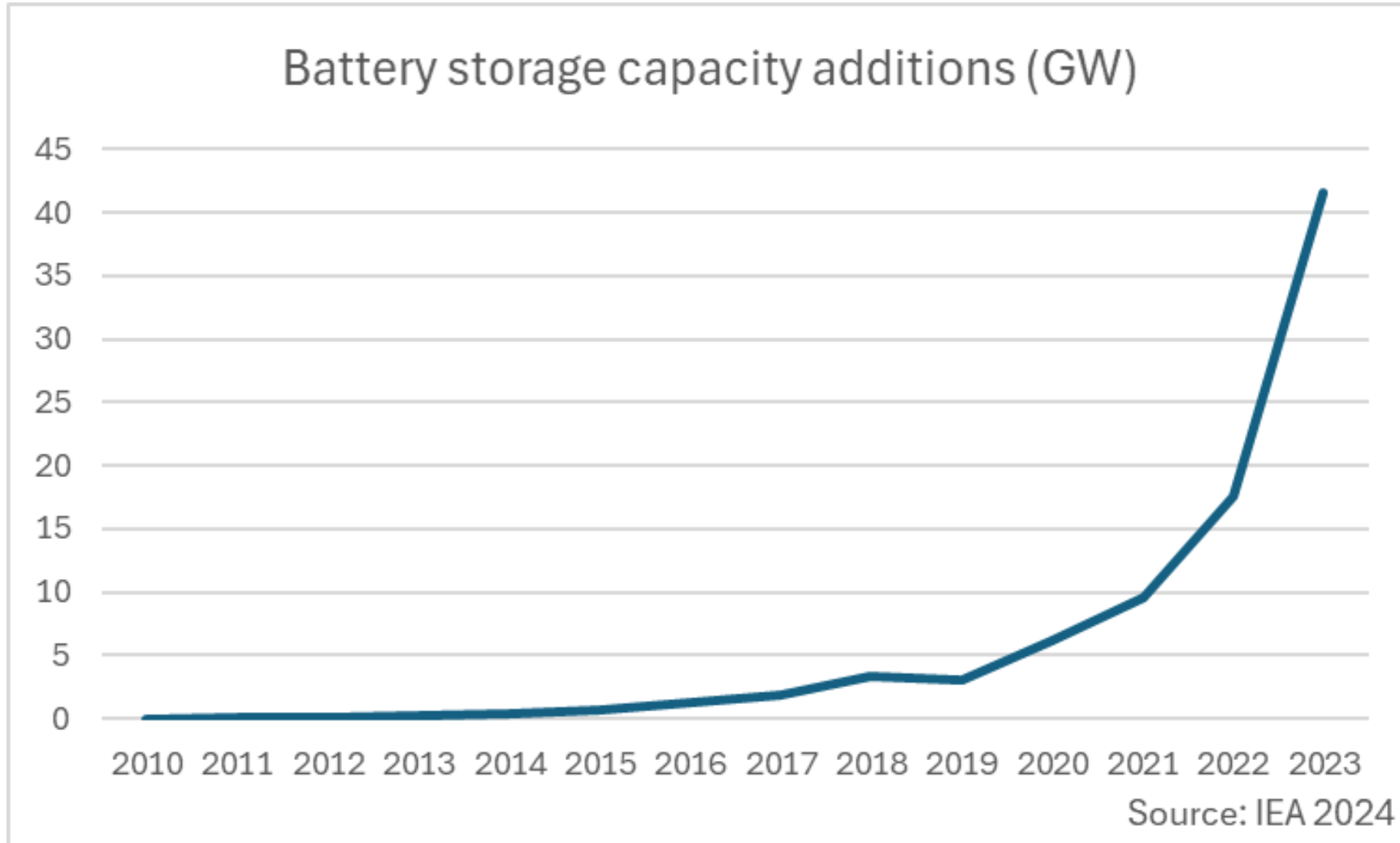
* As of 7 Nov. 2025

Contents

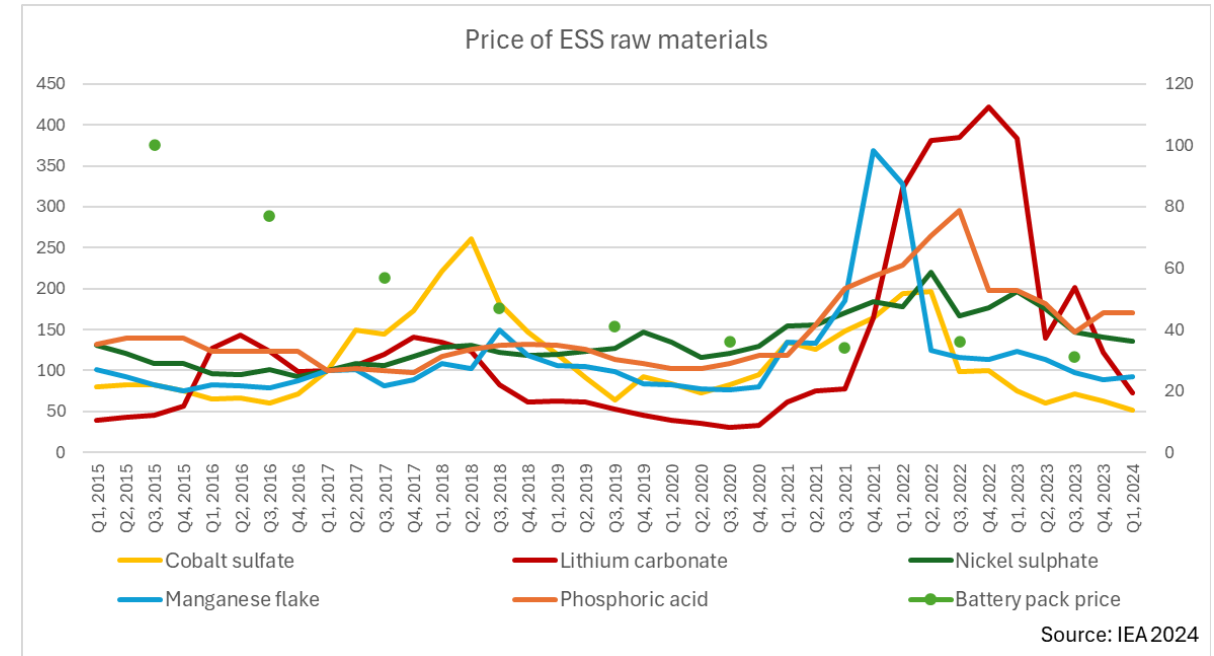
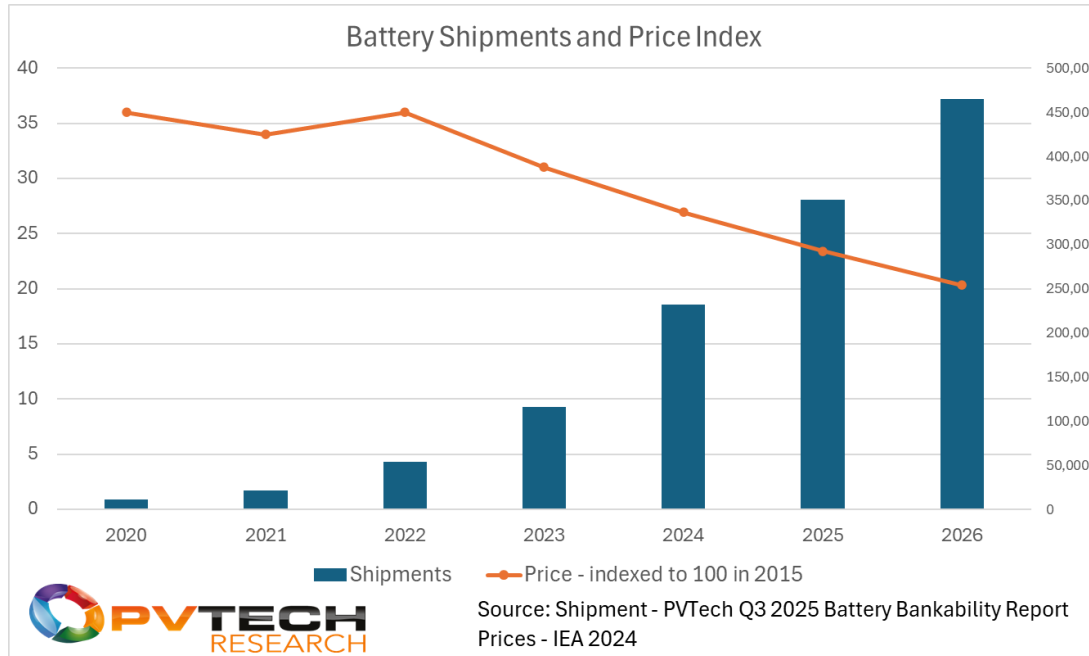
- Market Overview
 - Raw Materials
 - Global Production
 - ESS vs PV
 - ESS Supply chain is a lot more complex
 - Bankability Pyramid

●● MARKET OVERVIEW

Quick history of ESS Systems



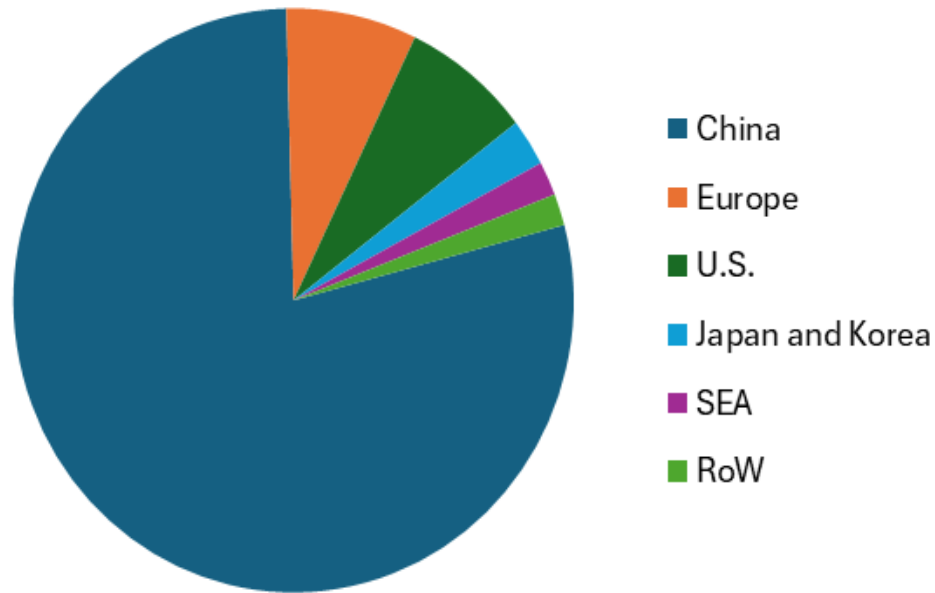
Raw material and battery prices



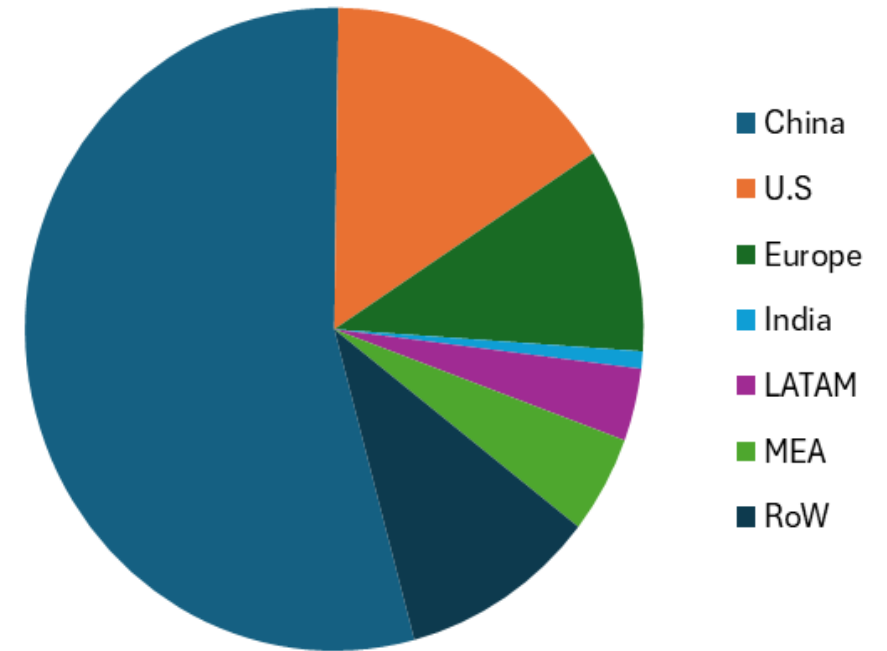
Shipments in this graph are in MW, while prices are indexed Jan 2015=100 for batteries and indexed Jan 2017=100 for all raw materials

China manufactures... who buys?

2025 Cell Capacity by Region for Top ESS Suppliers



2025 Shipments by Region for Top ESS Suppliers



Solar Vs Batteries

Solar:

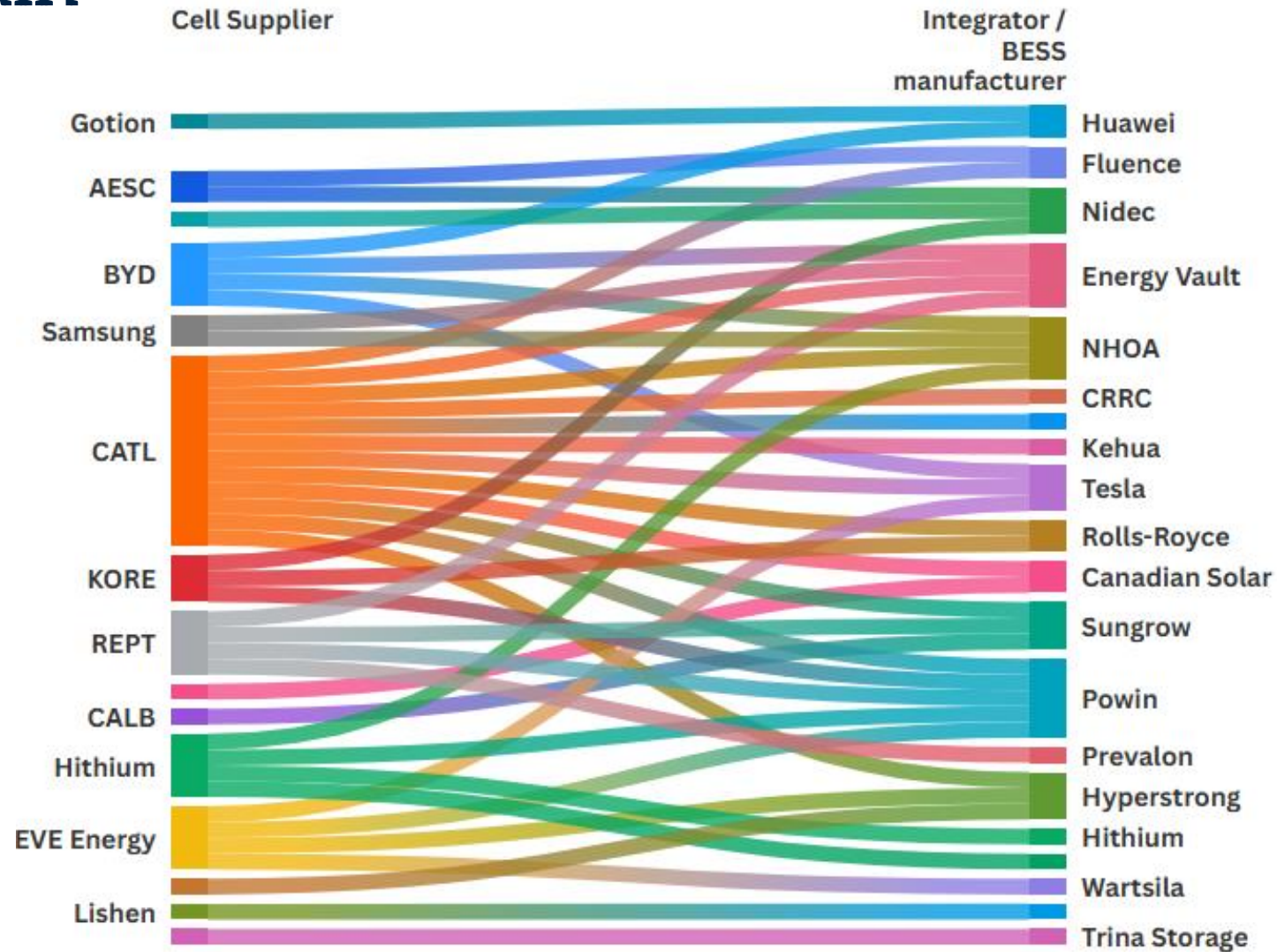
- Energy producer
- Oversupply guarantees low prices – reaching commoditisation
- Deployment and operation are well established and well understood.
- Can not – alone – support the grid and at times require significant grid upgrades.

Batteries:

- Energy storage
- Still a sizeable investment – not commoditised yet
- Still an evolving landscape with different technologies and durations.
- Can lower the need to upgrade congested grids and can unlock grid-forming potentials for renewables.

Batteries are crucial to unlock an energy system dependent on intermittent renewables.

Supply Chain



Thank you!

For more information about the
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