Batteries on the grid

- Store and release energy using reversible chemical reactions that are activated by an electrical current.
- Efficient over short periods but lose charge over hours and days.
- Because the chemicals inside batteries are often corrosive, they break down over time and may not last as long as some other storage technologies.
- Individual battery cells do not store very much energy but can be stacked inside shipping containers and warehouses to store energy at larger scales.

Shipping container containing stacked batteries in Somerset. Copyright Western Power Distribution & British Solar Renewables

Key facts	
Technologies:	Lead acid, lithium ion, nickel cadmium, sodium sulphur
Location:	National grid. Communities.
Readiness:	Demonstration stage
Environmental impacts, safety and resource use:	• Batteries contain a range of toxic materials which need to be mined and disposed of after use. These activities can be highly polluting to local environments. • Most batteries contain corrosive chemicals or operate at high temperatures posing fire risks. They need to be produced to high quality standards to ensure safety.

Applications

- Enables more renewables
- Storage across hours & days
- Less network upgrades
- Use in remote areas
- Back-up power
- Power quality