



## demand for portable energy storage is growing rapidly

Are battery energy storage systems the future of electricity? In the electricity sector, battery energy storage systems emerge as one of the key solutions to provide flexibility to a power system that sees sharply rising flexibility needs, driven by the fast-rising share of variable renewables in the electricity mix. Should governments consider energy storage? In the electricity sector, governments should consider energy storage, alongside other flexibility options such as demand response, power plant retrofits, or smart grids, as part of their long-term strategic plans, aligned with wind and solar PV capacity as well as grid capacity expansion plans. When will battery storage capacity increase in the world? In the STEPS, installed global, grid-connected battery storage capacity increases tenfold until 2050, rising from 27 GW in 2020 to 270 GW. Deployments accelerate further after 2030, with the global installed capacity reaching nearly 500 GW in 2050. How much does a battery energy storage system cost? The average installed cost of battery energy storage systems designed to provide maximum power output over a 4-hour period is projected to decline further, from a global average of around USD 285/kWh in 2020 to USD 185/kWh in the STEPS and APS and USD 180/kWh in the NZE Scenario by 2050. What is the global battery storage capacity in 2020? At the end of the year 2020, total global installed stationary battery storage capacity stood at more than 27 GW (IRENA, p. 311). The speed of the increase has been substantial: just 10 years ago, the global installed battery energy storage was less than 1 GW in total. Are solar PV and battery energy storage a cost-competitive solution? This makes renewables, in particular solar PV, combined with utility-scale battery energy storage one of the most cost-competitive solutions to provide dispatchable capacity in many markets in 2020, with the levelized cost of electricity falling below that of new combined-cycle gas turbines (IRENA, p. 406). The global portable energy storage system market was valued at USD 4.4 billion in 2020 and is expected to reach USD 40.9 billion by 2030, growing at a CAGR of 24.2%. The global portable energy storage system market was valued at USD 4.4 billion in 2020 and is expected to reach USD 40.9 billion by 2030, growing at a CAGR of 24.2%. Growing trends in mobility, such as camping, hiking, and the use of recreational vehicles, are expected to impact the product. In an era of rapid technological advancements and growing energy demands, the market for portable energy storage systems is poised for significant expansion. As industries, households, and businesses seek reliable, sustainable, and efficient energy solutions, the demand for portable energy storage. The global portable energy storage device market size was valued at approximately USD 11.5 billion in 2020 and is projected to reach around USD 25.6 billion by 2030, growing at a compound annual growth rate (CAGR) of 9.3% during the forecast period. The market growth is primarily driven by the portable energy storage (PES) market is experiencing rapid growth, driven by the increasing demand for mobile power solutions in various applications, including consumer electronics, off-grid power, emergency backup, and portable energy-intensive devices. Portable energy storage systems provide convenient power solutions for a variety of applications. The Portable Energy Storage (PES) market is a rapidly growing sector driven by the increasing demand for sustainable and reliable energy solutions. PES systems, which include portable batteries, power banks, and energy storage devices, offer convenient power solutions for a variety of applications. Portable energy storage products are safe, convenient, clean, and low-



