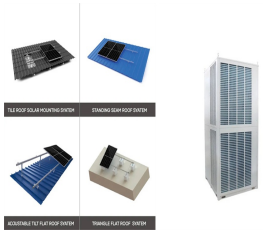
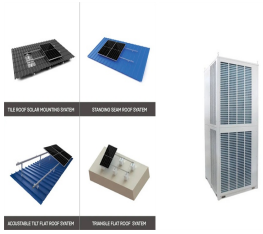
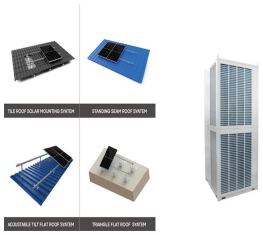
GWH OF ENERGY STORAGE BATTERY



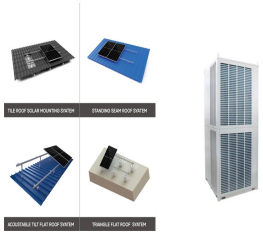
What is a battery energy storage system? A battery energy storage system (BESS) is an electrochemical devicethat charges (or collects energy) from the grid or a power plant and then discharges that energy at a later time to provide electricity or other grid services when needed.



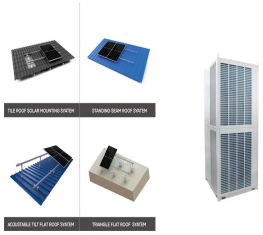
How big is battery storage capacity in the power sector? Battery storage capacity in the power sector is expanding rapidly. Over 40 gigawatt (GW) was added in 2023, double the previous year???s increase, split between utility-scale projects (65%) and behind-the-meter systems (35%).



How many GWh of battery energy storage will be needed by 2040? Demand for BESSs continues to grow and forecasts expect that almost 3000 GWhof stationary storage capacity will be needed by 2040,providing substantial market opportunities . Investments in battery energy storage systems were more than $5 billion in 2020. $2 billion were allocated to small-scale BESS and $3.5 billion to grid-scale BESSs .

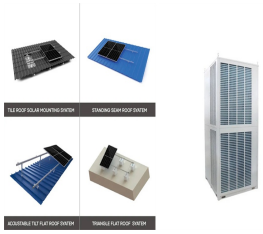


What is the storage capacity of a battery system? Storage capacity of battery systems typically ranges from residential systems with 2????25 kWhto industrial battery systems on a MWh scale ,,. Demand for BESSs continues to grow and forecasts expect that almost 3000 GWh of stationary storage capacity will be needed by 2040,providing substantial market opportunities .

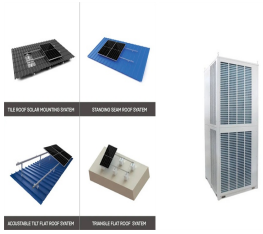


What is the importance of batteries for energy storage and electric vehicles? The importance of batteries for energy storage and electric vehicles (EVs) has been widely recognized and discussed in the literature. Many different technologies have been investigated , , . The EV market has grown significantly in the last 10 years.

GWH OF ENERGY STORAGE BATTERY



Does India have a plan for battery energy storage? In its draft national electricity plan,released in September 2022,India has included ambitious targets for the development of battery energy storage. In March 2023,the European Commission published a series of recommendations on policy actions to support greater deployment of electricity storage in the European Union.



Each project comprises 86 Megapacks, Tesla's battery energy storage system, and Lumina II and Radian will be operated by Autobidder, Tesla's real-time trading platform. The three sites will move from concept to commissioned in under 12 months and each will provide a capacity of 320 MWh of battery storage with a two-hour duration.

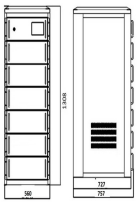
The four projects offered in the tender include the 500-MW Al-Muwyah and 500-MW Haden battery energy storage projects in Makkah province, the 500-MW Al-Khushaybi project in Al-Qassim province and the 500-MW Al-Kahafa project in Hail province. All four batteries will have a storage period of four hours.

EXCELSIOR, Minn. -- Business Wire --Excelsior Energy Capital ("Excelsior" or "the firm"), a leading renewable energy infrastructure investor, today announced it has entered into a multiyear agreement with Fluence Energy Inc. (NASDAQ: FLNC), a global provider of energy storage systems, to develop 2.2 GWh of battery energy storage system (BESS) infrastructure in ???

The market for battery energy storage systems is growing rapidly. Here are the key questions for those who want to lead the way. (GWh) in annual utility-scale installations forecast for 2030 would give utility-scale BESS a share of up to 90 percent of the total market in that year (Exhibit 2). 2.

GWH OF ENERGY STORAGE BATTERY


This industry-leading milestone marks a new era of scale in battery-based energy storage installations and growth. The global battery storage market is growing at rapid speed, with front-of-the-meter additions 1 on track to hit approximately 158 GWh annually by 2030 according to the BloombergNEF 2H 2023 Energy Storage Market Outlook. The global

The GWh-scale supply deals in the energy storage space are becoming a norm. The deal amounted to 15.3 GWh, equating to around 165% of the total battery energy storage systems deployed in Q2 2024, which saw the highest ???

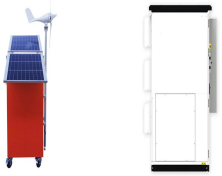

2 ? Cornwall Insight calculates that Ireland's battery storage capacity will reach 13.5 GWh by 2030, up from 2.7 GWh in 2025. Chinese manufacturer Deye says its new energy storage system (ESS


According to InfoLink's global lithium-ion battery supply chain database, energy storage cell shipment reached 114.5 GWh in the first half of 2024, of which 101.9 GWh going to utility-scale (including C& I) sector and 12.6 GWh going to small-scale (including communication) sector. The market experienced a downward trend and then bounced back in the first half, ???


A recent study reported that several TWh of storage capacity will be needed for 43???81 % renewable penetration by adding together all the short-duration storage (<12 h), but ???

GWH OF ENERGY STORAGE BATTERY

Battery energy storage systems (BESS) will have a CAGR of 30 percent, and the GWh required to power these applications in 2030 will be comparable to the GWh needed for all applications today. China could account for 45 percent of total Li-ion demand in 2025 and 40 percent in 2030???most battery-chain segments are already mature in that country.



The project will account for a sizeable chunk of New Mexico's mandate of 2 GW/7 GWh of utility battery energy storage capacity by 2034. The Atrisco complex combines 364 MW of solar generation capacity with 1.2 GWh of battery storage, cost $827 million to build, and will be financed by $290 million of term debt and $420 million of tax equity

In addition, the company has 3.4 GWh of locked-in energy storage capacity through battery energy storage system and hydro pumped storage project. It aims to reach 20 GW generation capacity and 40 GWh of energy storage capacity before 2030. JSW Energy has set an ambitious target of achieving Carbon Neutrality by 2050.

The total volume of batteries used in the energy sector was over 2 400 gigawatt-hours (GWh) in 2023, a fourfold increase from 2020. In the past five years, over 2 000 GWh of lithium-ion ???

The global battery storage market is growing at rapid speed, with front-of-the-meter additions 1 on track to hit approximately 158 GWh annually by 2030 according to the BloombergNEF 2H 2023 Energy

Megapack is a powerful battery that provides energy storage and support, helping to stabilize the grid and prevent outages. Find out more about Megapack. 10+ GWh Deployed Deployed Infinitely Scalable Infinitely Scalable 3.9 MWh Per Unit Per Unit Order Now. A Cleaner Grid. The

future of renewable energy relies on large-scale energy storage.

GWH OF ENERGY STORAGE BATTERY

Records are tumbling for Tesla's battery energy storage business, with 9.4 GWh of systems deployed in the second quarter of 2024. This is more than double the capacity deployed in the previous record quarter, marking a 135% jump. Tesla Energy posted standout Q1 figures, with a record 4,053 MWh of energy storage capacity deployed, up by 132%

Tesla and Intersect Power announced a contract for 15.3 GWh of Megapacks, Tesla's battery energy storage system, for Intersect Power's solar + storage project portfolio through 2030. This agreement, when combined with previous commitments, make Intersect Power one of the largest buyers and operators of Megapacks globally with nearly 10 GWh of ???

LATHROP, Calif., July 18, 2024--Tesla and Intersect Power today announced a contract for 15.3 GWh of Megapacks, Tesla's battery energy storage system, for Intersect Power's solar + storage

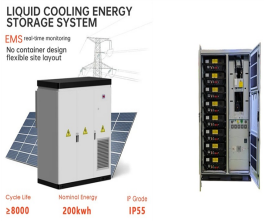
ESS enables the energy transition and accelerates renewables with long-duration energy storage that is safe and sustainable. Investors; As the first commercial manufacturer of iron flow battery technology, ESS is delivering safe, sustainable, and flexible LDES around the world. ESS Tech, Inc. (NYSE: GWH) is the leading manufacturer of

In 2022, Fluence announced commercial operation of the Luna Battery Storage Project and the Lancaster Area Battery system, a combined 227 MW / 908 MWh energy storage complex in California that

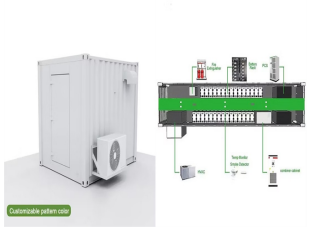
GWH OF ENERGY STORAGE BATTERY

Desay Battery's 314 Ah energy storage cell becomes the first to pass new national standard test On August 10, Desay Battery's self-developed 314Ah energy storage cell successfully passed the new national standard GB/T 36276-2023 test, becoming the first lithium-ion battery for energy storage in the industry to meet the new national standard

NatPower UK, part of global energy transition developer NatPower Group, has announced that it is going to drive a multi-billion investment to deliver the UK's largest portfolio of battery storage, totalling over 60 GWh.



Industry watchers have observed that Tesla Energy's battery storage deployments in Q1 and Q2 are already at 13.5 GWh, with two quarters remaining in the year. This is close to the company's



The 10 MW facility proposed by FuturEnergy Ireland will be capable of storing 1 GWh of energy. The joint venture of Ireland's state-owned forestry business Coillte and utility ESB submitted a planning application earlier this week for its first battery storage project, Ballynahone Energy Storage, to Donegal County Council.

These projects are anticipated to help foster a domestic supply chain for critical clean tech manufacturing in the U.S. and directly support American jobs and battery storage production capacity. Battery cells for the 2+ GWh of projects will primarily be manufactured in Tennessee and battery modules will be manufactured by Fluence in Utah.

Image: SungrowChina-headquartered Sungrow announced on Tuesday the signing of three landmark energy storage contracts with Saudi Arabia's investment group Algihaz Holding, amounting to the world's largest grid-side storage order.Each p Sungrow Secures 7.8 GWh Battery

GWH OF ENERGY STORAGE BATTERY

Storage Deal From Saudi Arabia

GWH OF ENERGY STORAGE BATTERY

The world shipped 196.7 GWh of energy-storage cells in 2023, with utility-scale and C& I energy storage projects accounting for 168.5 GWh and 28.1 GWh, respectively, according to the Global Lithium-Ion Battery Supply Chain Database of InfoLink. The energy storage market underperformed expectations in Q4, resulting in a weak peak season with only ???

For energy storage, the capital cost should also include battery management systems, inverters and installation. The net capital cost of Li-ion batteries is still higher than $400 kWh ???1 storage. The real cost of energy storage is the LCC, which is the amount of electricity stored and dispatched divided by the total capital and operation cost