

# US NEW ENERGY STORAGE



What is the future of energy storage? Storage enables electricity systems to remain in balance despite variations in wind and solar availability, allowing for cost-effective deep decarbonization while maintaining reliability. The Future of Energy Storage report is an essential analysis of this key component in decarbonizing our energy infrastructure and combating climate change.



Which states will have the most battery storage capacity in 2024? Texas, with an expected 6.4 GW, and California, with an expected 5.2 GW, will account for 82% of the new U.S. battery storage capacity. Developers have scheduled the Menifee Power Bank (460.0 MW) at the site of the former Inland Empire Energy Center natural gas-fired power plant in Riverside, California, to come on line in 2024.



How many battery storage projects are coming to Texas? Developers expect to bring more than 300 utility-scale battery storage projects on line in the United States by 2025, and around 50% of the planned capacity installations will be in Texas. The five largest new U.S. battery storage projects that are scheduled to be deployed in California and Texas in 2024 or 2025 are:



Is energy storage a viable resource for future power grids? With declining technology costs and increasing renewable deployment, energy storage is poised to be a valuable resource on future power grids but what is the total market potential for storage technologies, and what are the key drivers of cost-optimal deployment?



Why is energy storage important? Energy storage is a potential substitute for, or complement to, almost every aspect of a power system, including generation, transmission, and demand flexibility. Storage should be co-optimized with clean generation, transmission systems, and strategies to reward consumers for making their electricity use more flexible.

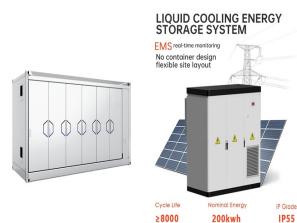
# US NEW ENERGY STORAGE



Which Texas town has the largest battery storage on a wind farm? A west Texas town recently became home to the largest battery storage on a wind farm, thanks to investments from the Energy Department. Often described as a??giant batteries,a?? pumped storage hydropower (PSH) plants account for the bulk of utility-scale electrical energy storage in the United States and worldwide.



megawatts is not much in the context of a total US generation capacity of more than a million megawatts. Lithium-ion technologies accounted for more than 95 percent of new energy-storage deployments in 2015.<sup>5</sup> They are also widely used in consumer electronics and have shown promise in automotive applications, such as plug-in hybrids



Energy storage resources are becoming an increasingly important component of the energy mix as traditional fossil fuel baseload energy resources transition to renewable energy sources. There are currently 23 states, plus the District of Columbia and Puerto Rico, that have 100% clean energy goals in place. Storage can play a significant role in achieving these goals a?|



Energy storage systems for electricity generation operating in the United States Pumped-storage hydroelectric systems. Pumped-storage hydroelectric (PSH) systems are the oldest and some of the largest (in power and energy capacity) utility-scale ESSs in the United States and most were built in the 1970's. PSH systems in the United States use electricity from electric power grids to a?|



Grid-scale storage plays an important role in the Net Zero Emissions by 2050 Scenario, providing important system services that range from short-term balancing and operating reserves, ancillary services for grid stability and deferment of investment in new transmission and distribution lines, to long-term energy storage and restoring grid

# US NEW ENERGY STORAGE



MITEI's three-year Future of Energy Storage study explored the role that energy storage can play in fighting climate change and in the global adoption of clean energy grids. Replacing fossil a?|



Storage deployments saw their second-best quarter ever, with overall clean energy installations on pace for a record year, according to the American Clean Power Association's Q2 2024 market report.



The US energy storage industry enjoyed another quarter of record growth in Q2 2023, with 1,680MW/5,597MWh of new installations tracked by Wood Mackenzie. The research and analysis group has just published the newest, Q3 2023 edition of its US Energy Storage Monitor report in partnership with the American Clean Power Association (ACP) trade group.



The US energy storage industry remained "remarkably resilient" during what most of us have found to be a difficult year a?? to say the least. Energy-Storage.news editor Andy Colthorpe speaks with Key Capture Energy's CEO Jeff Bishop and FlexGen's COO Alan Grosse a?? two companies that made 2020 one of growth in their energy storage



Development of New Energy Storage during the 14th Five -Year Plan Period, emphasizing the fundamental role of new energy storage technologies in a new power system. The Plan states that these technologies are key to China's carbon goals and will prove a catalyst for new business models in the domestic energy sector. They are also

# US NEW ENERGY STORAGE



Global energy storage market: H1 2024 installation figures Policy mandates in China have driven the global energy storage market in the first half of 2024 to new highs, backed by the rapid growth in the US market. Meanwhile, Europe posted mixed results.



LG Energy Solution VP Hyung-Sik Kim and CEO of system integrator LG ES Vertech Jaehong Park speak with ESN Premium. At the 2023 edition of the RE+ clean energy trade show for North America, LG Energy Solution (LG ES) launched its system integrator arm for the US, LG ES Vertech.



The U.S. Department of Energy announced the creation of two new Energy Innovation Hubs led by DOE national laboratories across the country. One of the national hubs, the Energy Storage Research Alliance (ESRA), is led by Argonne National Laboratory and co-led by Berkeley Lab and Pacific Northwest National Laboratory.



"Because these storage resources are so new, the rules are still catching up," said Natalie McIntire, who works on grid issues for the Natural Resources Defense Council, an environmental group.



The Inflation Reduction Act's incentives for energy storage projects in the US came into effect on 1 January 2023. Energy-Storage.news' publisher Solar Media will host the 5th Energy Storage Summit USA, 28-29 March 2023 in Austin, Texas. Featuring a packed programme of panels, presentations and fireside chats from industry leaders



The state is expected to open a community solar-plus-storage programme next year, which will likely make it a leader in the CCI segment too, with the scheme predicted by Wood Mackenzie to result in a doubling of CCI deployments across the US for the year. Energy-Storage.news' publisher

# US NEW ENERGY STORAGE

---

Solar Media will host the 6th Energy Storage Summit USA

# US NEW ENERGY STORAGE



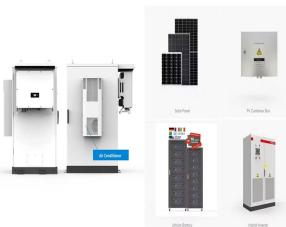
The new US Energy Storage Monitor | Q3 2024 will be released on Tuesday, October 1. Wood Mackenzie and ACP produce quarterly executive summaries that are complementary to our members. The US Energy Storage Monitor full report is available to ACP members at an exclusive discount.



. New Inclusive Energy Innovation Prize Launches. To help achieve ambitious goals to address climate change, the DOE has launched a new \$2.5 million Inclusive Energy Innovation Prize to fund organizations working with disadvantaged communities in clean energy as well as foster connections between DOE and innovators the agency has yet a?|



The U.S. Department of Energy on Thursday finalized a \$475 million loan for Li-Cycle Holdings, giving the metals recycler a financial lifeline to build a New York battery processing facility seen



Chapter 2 a?? Electrochemical energy storage. Chapter 3 a?? Mechanical energy storage. Chapter 4 a?? Thermal energy storage. Chapter 5 a?? Chemical energy storage. Chapter 6 a?? Modeling storage in high VRE systems. Chapter 7 a?? Considerations for emerging markets and developing economies. Chapter 8 a?? Governance of decarbonized power systems



Battery Storage in the United States: An Update on Market Trends. Release date: July 24, 2023. This battery storage update includes summary data and visualizations on the capacity of large-scale battery storage systems by region and ownership type, battery storage co-located systems, applications served by battery storage, battery storage installation costs, and small-scale a?|

# US NEW ENERGY STORAGE



Developers expect to bring more than 300 utility-scale battery storage projects on line in the United States by 2025, and around 50% of the planned capacity installations will be a?|



A total of about US\$7 billion support for domestic electric vehicle (EV) and stationary energy storage battery value chains will be paid out through the law. Energy-Storage.news" publisher Solar Media will host the 5th Energy Storage Summit USA, 28-29 March 2023 in Austin, Texas. Featuring a packed programme of panels, presentations and



The US Department of Energy (DOE) sought public input on how to direct US\$505 million funding for its Long Duration Energy Storage for Everyone, Everywhere Initiative (LD ESEE), unlocked through the November 2021 passing of the Bipartisan Infrastructure Law. Energy-Storage.news" publisher Solar Media will host the eighth annual Energy



Long duration energy storage (LDES) generally refers to any form of technology that can store energy for multiple hours, days, even weeks or months, and then provide that energy when and if needed.



Energy News Weekly A weekly look at the energy landscape for those interested in clean energy and how it plays into the fight against climate change.; U.S. Energy News Daily updates for energy professionals across the United States.; Midwest Energy News Daily updates for energy professionals from the Midwestern states.; Southeast Energy News a?|

# US NEW ENERGY STORAGE

---



Energy storage allows us to store clean energy to use at another time, increasing reliability, controlling costs, and helping build a more resilient grid. Experience demonstrate that interconnected power systems can safely and reliably integrate high levels of renewable energy without new energy storage resources. Several states like Iowa



As the leading US energy storage markets continue their phenomenal growth trajectory, the role batteries can play in keeping the grid stable has been highlighted by recent heatwaves. A dedicated section contributed by the Energy-Storage.news team, and full access to upcoming issues as well as the nine-year back catalogue are included as