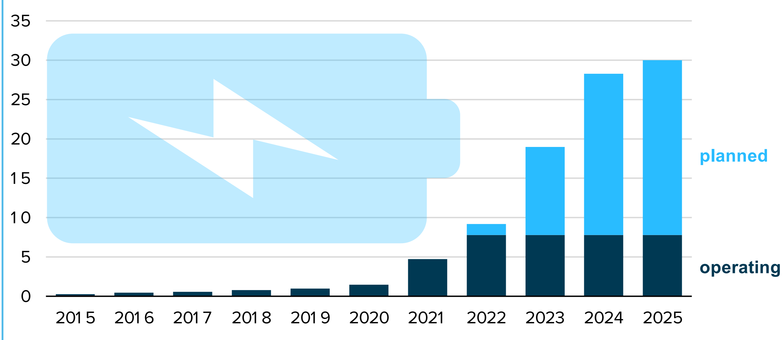
Battery Storage is Booming

Utility-scale storage is needed to complement growth of renewable energy. **BY JOHN KOSOWATZ**

Until 2020, energy storage systems in the U.S. consisted mostly of hydroelectric pumped storage projects. That is all in the past as renewable energy, primarily wind and solar, are added to the fleet of electric generating stations. As those plants power up, their potential will depend on new storage systems to buffer their intermittent operations. The U.S. Energy Information Administration now projects grid-scale battery storage capacity will jump, reaching 30 GW of capacity by the end of 2025. As of October 2022, EIA reports there was 7.8 GW of utility-scale battery capacity.

U.S. BATTERY STORAGE CAPACITY WILL INCREASE SIGNIFICANTLY BY 2025

U.S. Battery Storage Capacity (2015-2025)
Gigawatts

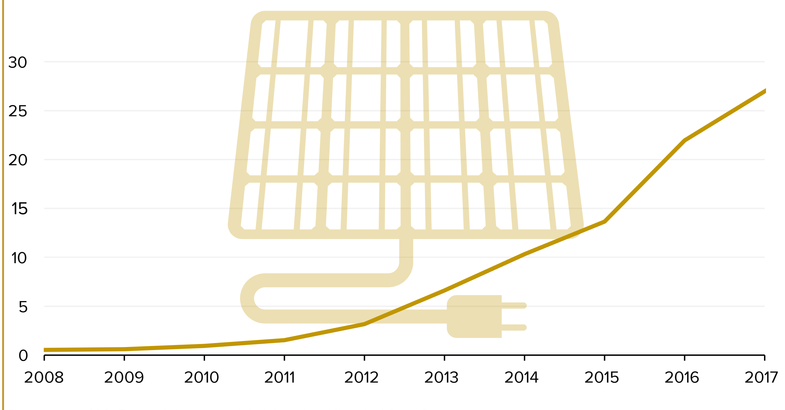


Data source: U.S. Energy Information Administration, *Preliminary Monthly Electric Generator Inventory*, October 2022

As more capacity becomes available to the grid, battery storage projects will be larger. The 250-MW Gateway Energy Storage System in California began operating in 2020 and represents the beginning of large-scale battery installation, according to EIA. By 2025, developers plan more than 23 large-scale battery systems ranging from 250 MW to 650 MW.

U.S. UTILITY-SCALE SOLAR CAPACITY (2008-2017)

Gigawatts



Data source: U.S. Energy Information Administration, Historical State Data

More than 75 percent of the 20.8 GW of planned expansion by 2025 is located in Texas and California. That is because of a growing need to accommodate large numbers of existing and planned solar and wind capacity in the two states. California already has more utility-scale solar capacity than any other state, 16.8 GW. Developers are working on another 7.7 GW to be added by the end of 2025. Texas already has 10.5 GW of utility-scale solar capacity with another 20.4 GW to be added by 2025. In addition, Texas has 37.2 GW of wind power, with another 5.3 GW to be added by 2025.