Q3 2026

U.S. Energy Storage Market Outlook

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Introduction to the Report

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SECTION

Executive Summary



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BESS market update and outlook

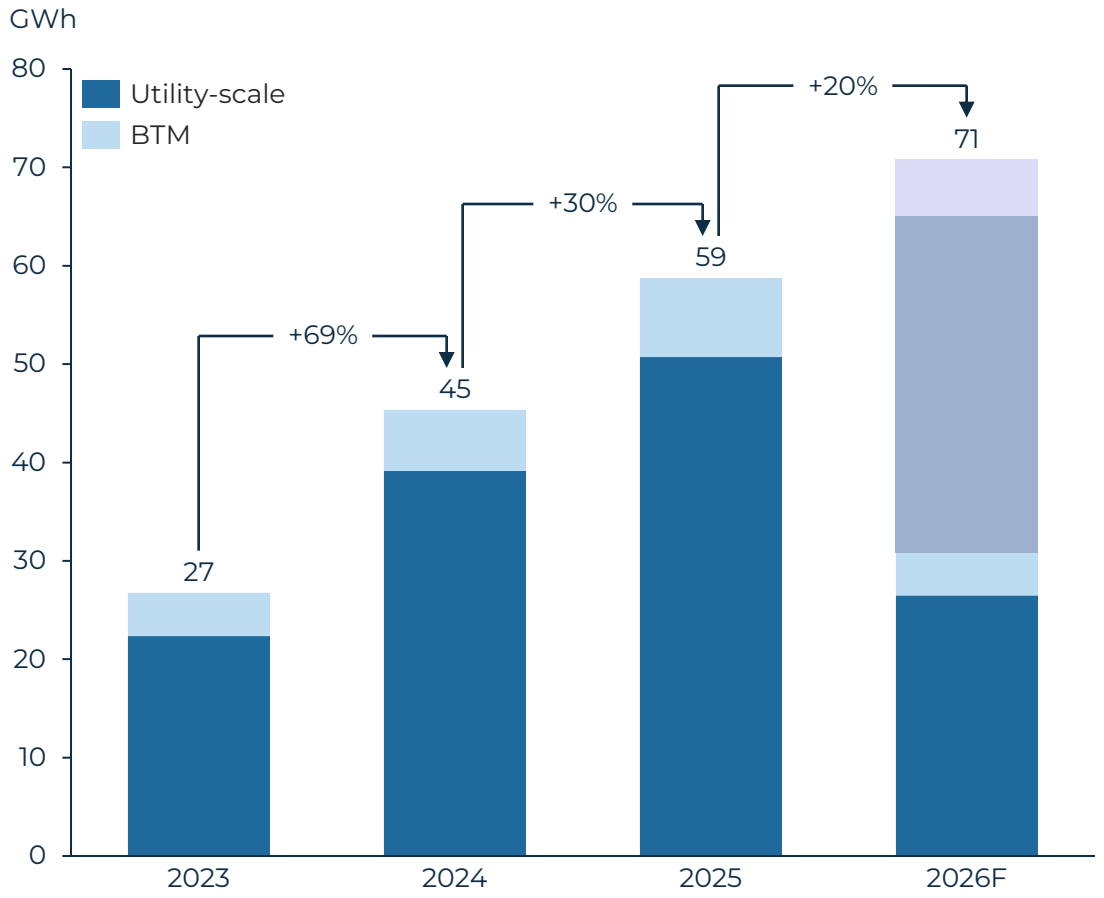
In the first half of 2026, just under 31 GWh/10.3 GW of battery energy storage systems (BESS) entered operation across the utility-scale and behind-the-meter (BTM) markets, a y-o-y increase of 23% (GWh). The utility-scale market continued to underpin growth with 26 GWh/8.1 GW installed, with ten states bringing more than 500 MWh of new capacity online.

In Q2, the U.S. added an all-time record of 20.2 GWh/ 6.7 GW. Of that, 18 GWh came from the utility space, largely supported by seven gigawatt-scale projects. In the BTM space, residential storage added 657 MWh and commercial and industrial (C&I) added 1.8 GWh.

The Federal Energy Regulatory Commission (FERC) issued show cause orders under Section 206 to all six major U.S. Regional Transmission Organizations and Independent System Operators (RTOs/ISOs). The directive requires regional operators to justify or reform their existing rules concerning large-load interconnection tariffs within 60 days. This edition covers the directive, along with the responses that have been issued to date.

The full Energy Storage Market Outlook report covers analysis of large load legislative updates, inverter supply chains, system pricing dynamics and developments in alternative chemistries within the manufacturing spotlight.

U.S. BESS annual installed capacity outlook by market segment, GWh



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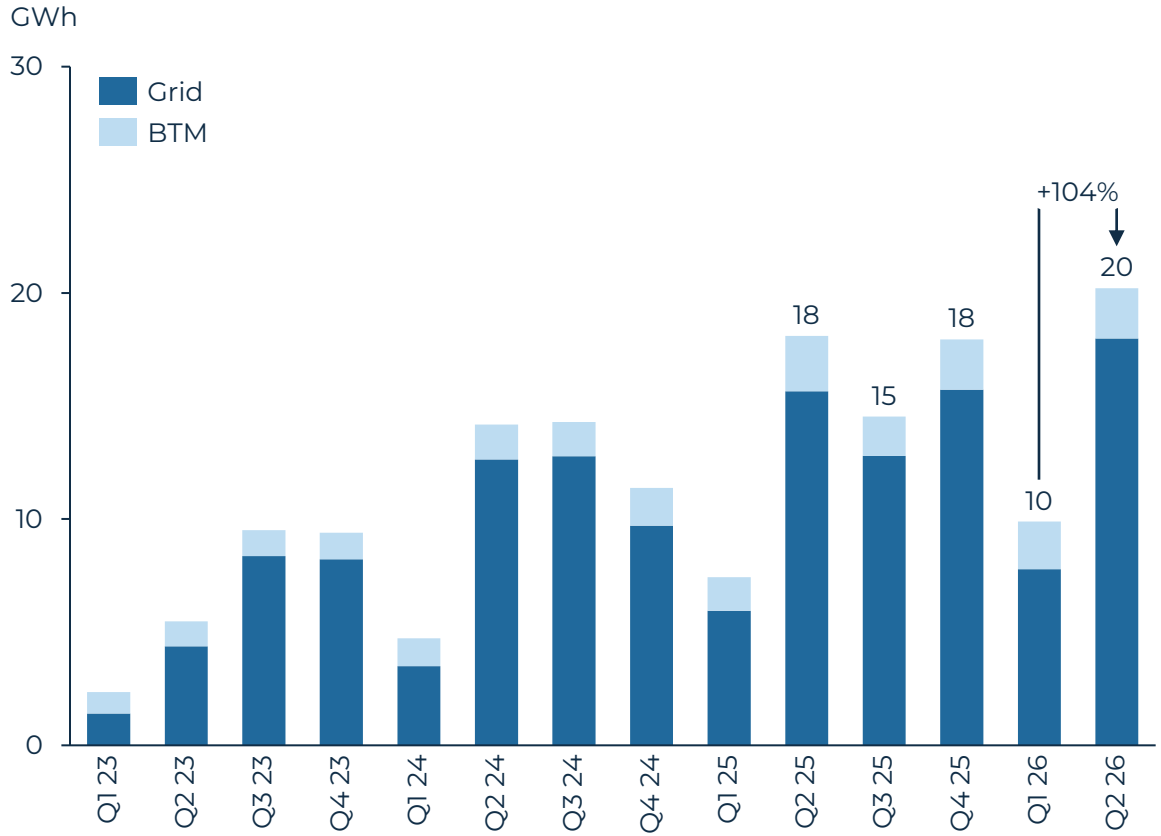
Quarterly market snapshot – Utility-scale & behind the meter

Q2 2026 saw BESS deployments of 20 GWh, up 11% compared to Q2 2025. The utility-scale market alone added 18.0 GWh of capacity, with Arizona, California, Utah, and Texas each deploying over 2.5 GWh. Across the quarter, seven gigawatt-scale projects came online – four in Arizona, two in California and one in Utah.

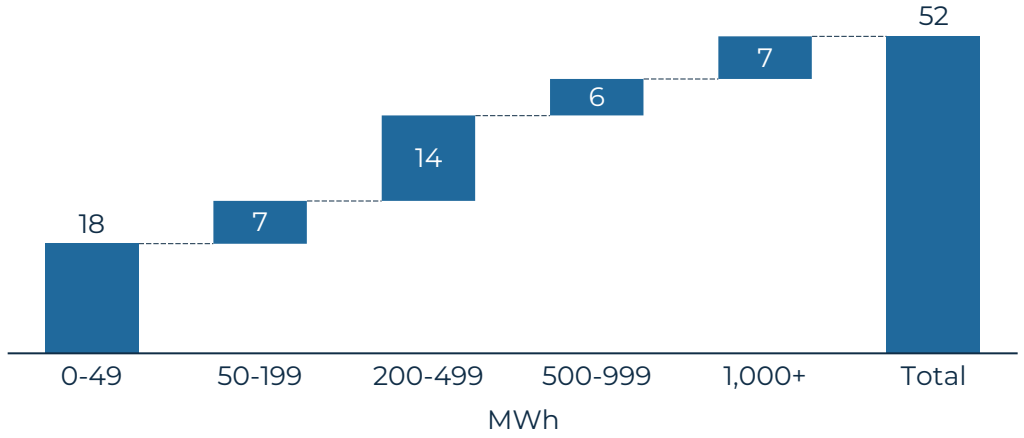
Quarterly deployments by market segment, GWh



Q2 utility-scale capacity additions by paired resource by GWh



Q2 number of utility-scale projects installed by capacity



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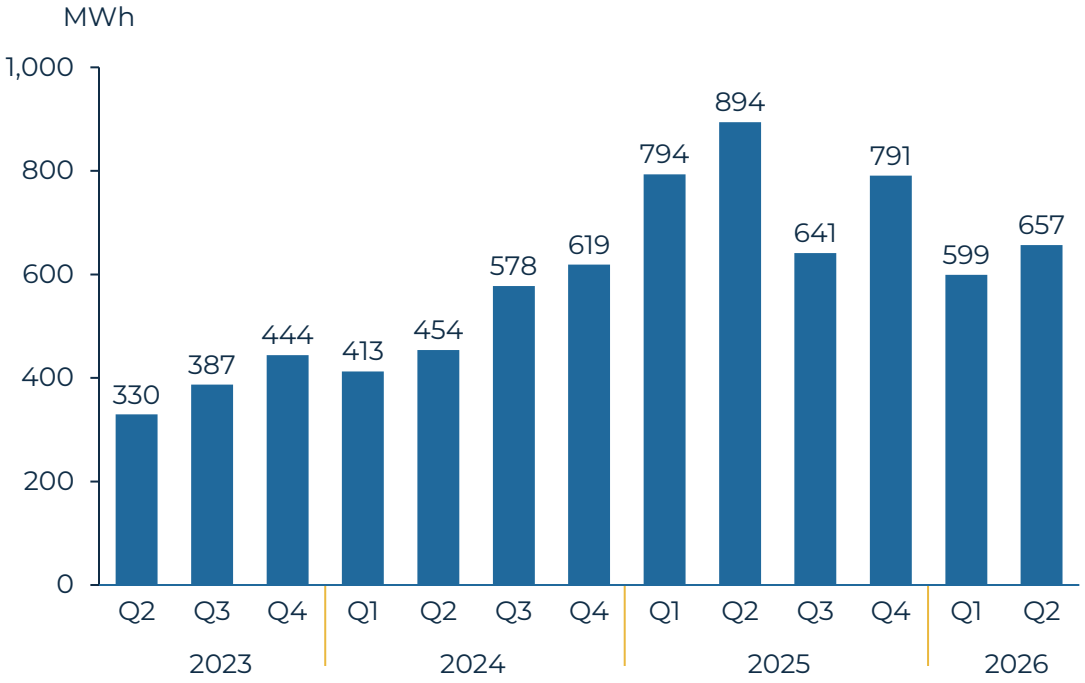
Residential BESS still faces headwinds

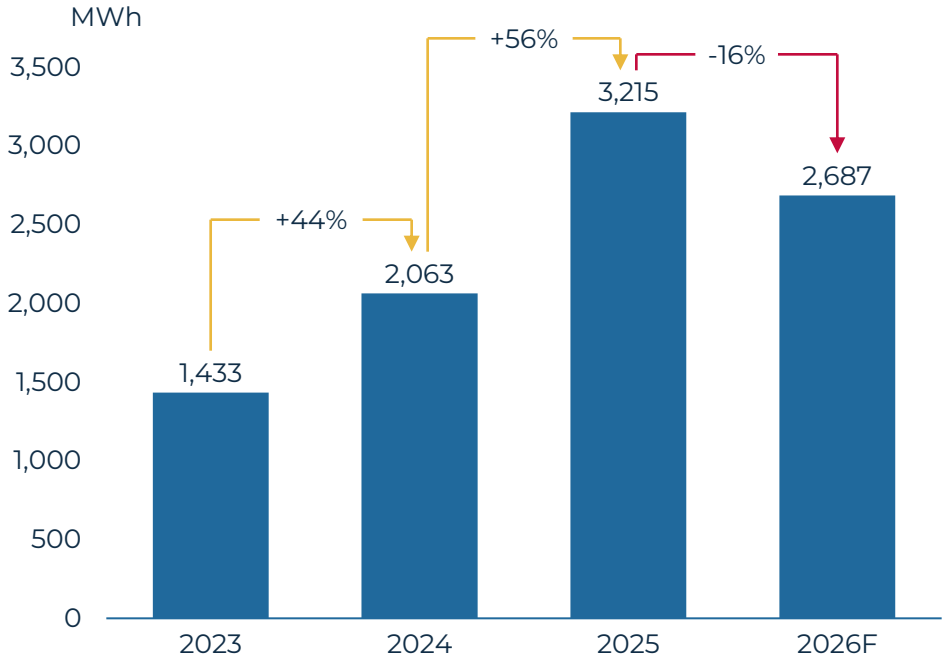
Residential BESS deployments in Q2 2026 remained under pressure, with 657 MWh of additions, a 27% decrease y-o-y. This sharper decrease is indicative of both the decrease in installations as a result of the removal of 25D, but also the surge in installations last year as capacity was pulled forward ahead of the incentive change.

The removal of 25D, while damaging in the short term, does not eliminate the underlying case for residential storage. Higher electricity costs, changes to net-metering, increased outage concerns, and increased support from states through virtual power plants and demand response schemes should help to support the industry in the long term. Increased backlash towards data center growth may also incentivize residential BESS, as private ratepayers look to shift risk away from increased electricity costs as a result of large load growth.

Quarterly residential BESS deployments, U.S.



Annual Residential BESS installations, 2023-2026F



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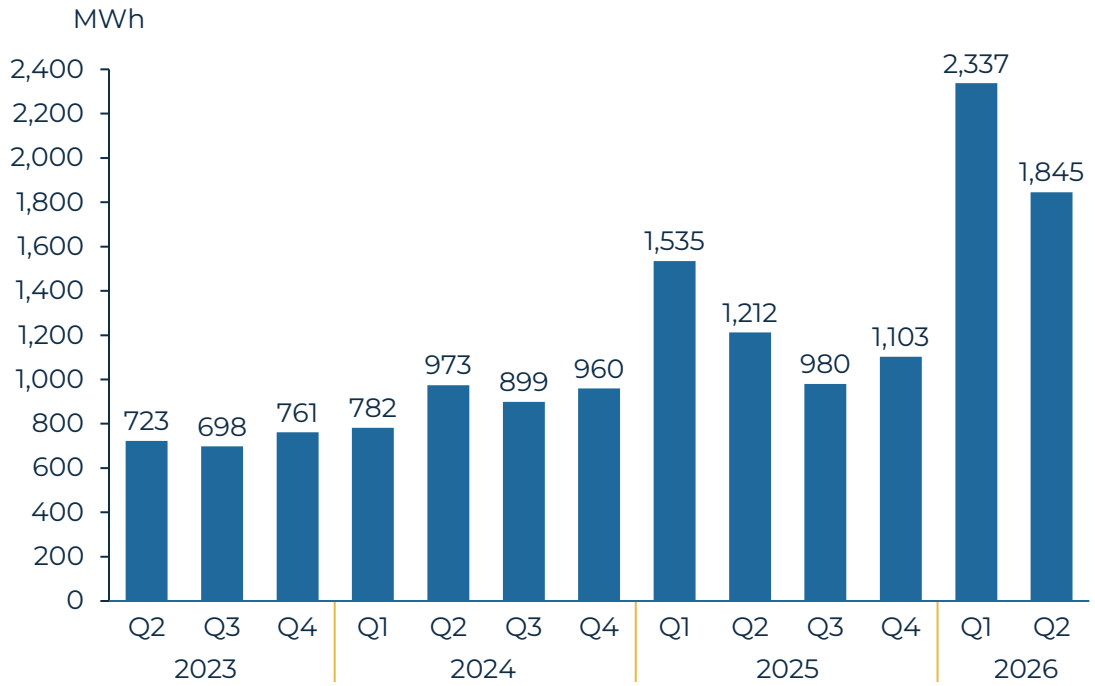
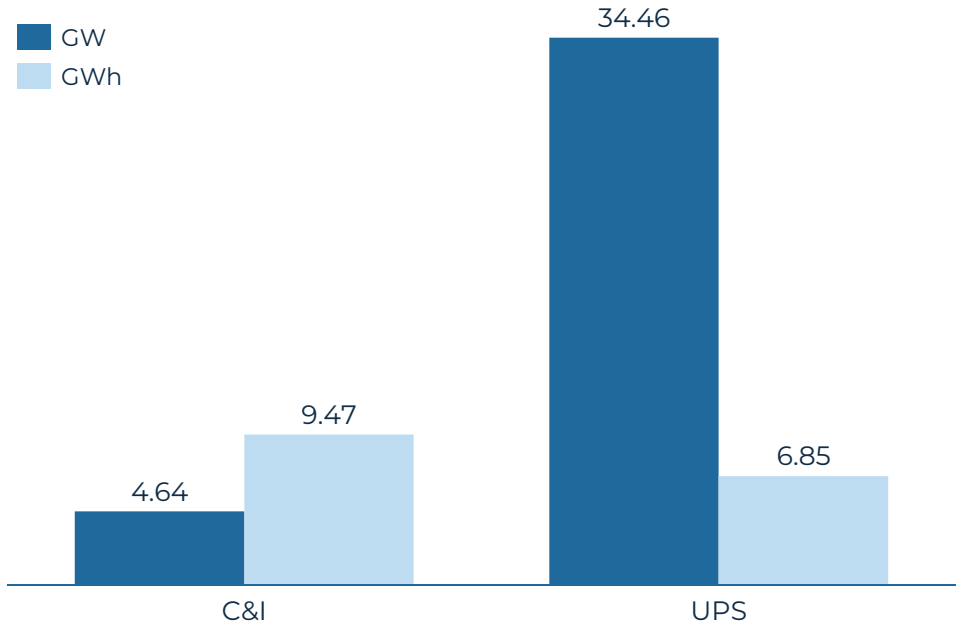
C&I to be driven by data centers

U.S. C&I BESS demand continues to be shaped by the rapid expansion of data centers and the growing difficulty of securing sufficient grid capacity. As a result, “bring your own generation” is becoming an increasingly important development theme, with developers combining BESS with on-site or co-located solar and wind generation to increase energy independence, manage intermittency, and reduce exposure to grid constraints. Batteries can shift renewable output, manage rapid changes in data center demand, and provide short-duration backup, while high-power uninterruptible power supply (UPS) systems continue to address power quality requirements within facilities. Natural gas generation is also being paired with storage in some hybrid configurations where dispatchable capacity is required, to provide rapid ramping for integration of NG generators, or while permanent grid connections are being developed. However, these facilities have opened up data center developers to increased criticism and pushback due to environmental impact.

Quarterly C&I and UPS BESS deployments, U.S.



BTM BESS installations – C&I and UPS applications, 2024-2026F



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BESS manufacturing & technology trends

Manufacturing updates

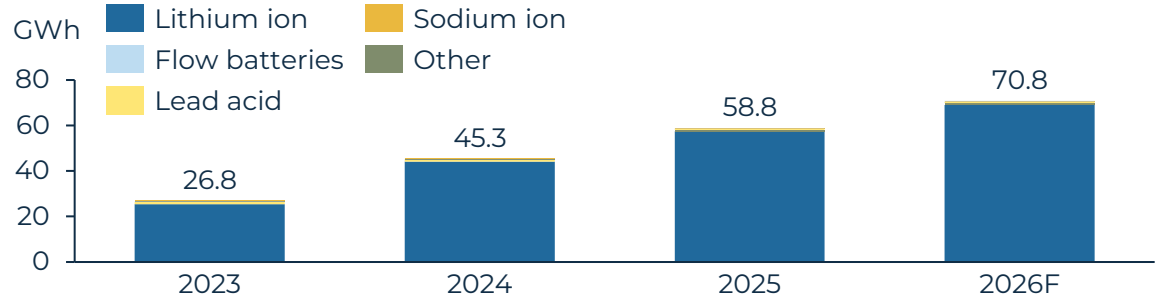
This quarter's manufacturing spotlight focuses on Tesla's manufacturing footprint in the U.S. and the shipping of its first Megapack units built with domestically produced LFP cells. The company also brought its third Megafactory online in Texas, which will carry a nameplate capacity of 50 GWh per year for Megapacks.

Elsewhere, planned North America BESS manufacturing capacity now exceeds 250 GWh, with LGES set to be the largest player with 44 GWh of nameplate capacity planned by the end of 2026. LGES aims to increase capacity to over 100 GWh by the end of the decade.

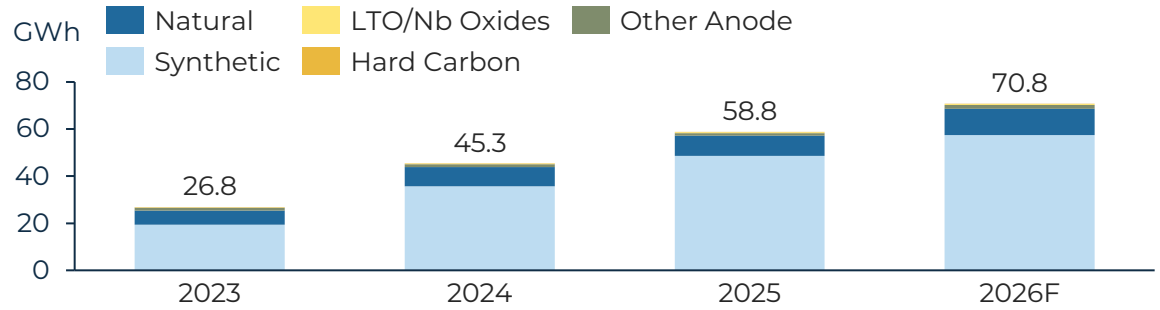
In July, L-H Battery Company Inc., the joint venture of LGES and Honda Motor Co., announced the production of its first battery cells produced at its recently completed manufacturing facility in Jeffersonville, Ohio. The facility, originally built to serve the EV market, is now producing cells for LGES's stationary energy storage system product offerings.

Samsung SDI announced plans to begin production of its prismatic LFP battery cells in the U.S. in October 2026, with the company currently undergoing quality validation.

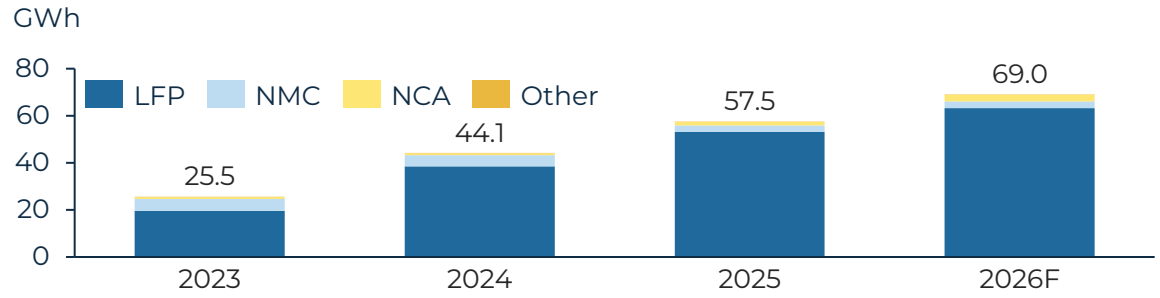
BESS outlook by battery type



Annual installed capacity BESS by anode



Li-ion BESS outlook by cathode type



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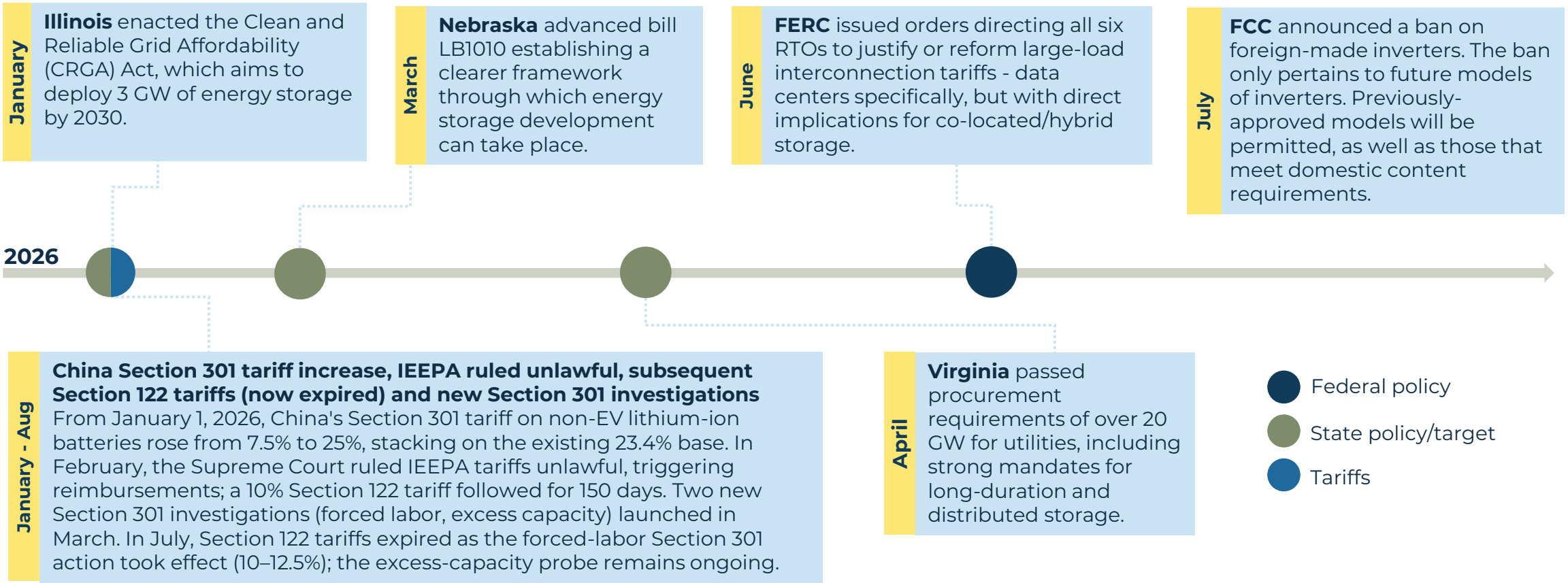
Key policy updates

The U.S. policy landscape for BESS since the start of 2026 has been a balancing act between domestic manufacturing ambitions, immediate grid needs, and energy security. Though there remains no final guidance regarding the precise methodology for Material Assistance Cost Ratio (MACR) calculations, we have seen a plethora of announcements from states to codify the importance of energy storage by announcing targets and incentive structures. Given the expected load growth across U.S. grids being driven by industries such as AI, we expect more of these announcements in future.



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Key terms & glossary

Energy:
BESS - Battery Energy Stationary Storage
RES - Renewable Energy Source
VRE - Variable Renewable Energy
DSR - Demand Side Response
DSM - Demand Side Management
LCOE – The Levelized Cost of Energy/Electricity
BTM – Behind the meter

Battery:
LTO - Lithium–Titanate
LFP - Lithium Iron Phosphate
LMNO – Lithium Manganese Nickel Oxide
LMO - Lithium Manganese Oxide
NMC/NCM - Lithium Nickel Manganese Cobalt Oxide
NCA - Lithium Nickel Cobalt Aluminum Oxide
LCO - Lithium Cobalt Oxide
VRFB - Vanadium Redox Flow Battery
Na-ion – Sodium ion

Other Storage types:
CAESS - Compressed Air Energy Storage System
FESS - Flywheel Energy Storage System
PHSS - Pumped Hydro Storage System
TESS - Thermal Energy Storage System

General:
RHS – Right hand side
LHS – Left hand side
YTD – Year-to-date
y-o-y – Year-over-Year

Terminology:
Rated Power Capacity [GW/MW] - how much power can flow in/out a battery at a given time

Energy Storage Capacity [GWh/MWh] - how much energy can be stored

Storage Duration [hour] - amount of time storage can discharge at its power capacity before depleting its energy capacity

Round-trip efficiency [%] - the quantity of electricity which can be recovered as a percentage of the electricity used to charge and discharge the device.

Notes on battery chemistry classifications:
The chemistry classifications used in this report are designed to provide representative coverage of the total market, while still being broad enough to facilitate a useful comparative analysis between categories.

It should be noted that within categories there is significant variation in the actual chemistry and material mix. In addition, different chemistry cathodes are often blended in order to achieve certain performance or cost parameters for a given projects.

The classifications used in this report are below, along with subcategories included in each broader grouping. These groupings are open to review as new chemistries become more dominant.

Cathode:
LFP, LMO, NCA, NMC111, NMC523, NMC622 (includes NMC613, NMC712), NMC811 (includes NMCA), Other (includes Lithium Sulphur, Metal Air and other early stage technologies)

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Key terms & glossary

Energy storage: The capture of energy produced at one time for use at a later time. Storage involves the conversion of energy from a form that is difficult to store to a form that is more convenient or economical to store for a longer period of time. Storage technologies can be the following:

Electro chemical	**Batteries**	Rechargeable batteries range in size from button cells to MW grid-scale, and store energy in an electrochemical cell. Battery chemistries include lithium-ion, lead acid, sodium based and nickel based. Flow batteries operate by passing a solution over a membrane where ions exchange to charge or discharge the cell.
Mechanical	**Hydropower**	The oldest form of energy storage, it currently accounts for over 90% of the global energy storage capacity. Stores energy by using off-peak electricity to pump water from a lower reservoir to an upper reservoir, and recovers energy at peak times by turbine generation when the water flows back to the lower reservoir.
	Flywheel	Stores energy in the form of rotational kinetic by accelerating a rotor/flywheel to a very high speed, added energy increases the speed, extracted energy decreases the speed.
	Compressed Air	Stores energy in an underground structure or an above-ground system, by running an electric motor to compress air at times of low demand and then releasing it through a turbine to generate energy at times of high-energy demand.
Thermal	**Sensible heat**	The temporary storage of energy in the form of heat, utilizing the sensible heat of a material, materials can be stored in contained aquifers, geological features like bedrock or old mines with the heat or cold from the material used months to years later.
	Latent heat	Latent heat storage works by the transfer of heat to or from a material to change its phase, e.g. a steam accumulator utilizing the phase change of water from liquid to gas.
Chemical	**Hydrogen**	Stored hydrogen is a form of energy, it can be used to produce electricity via a hydrogen fuel cell through the process of electrolysis. Hydrogen can either be produced in situ or produced elsewhere and delivered.
Other	**Other**	There are many other technologies in use, being explored and developed, including capacitors. chemical storage, superconducting magnets, solid mass-gravitational storage, cryogenic thermal and biological storage

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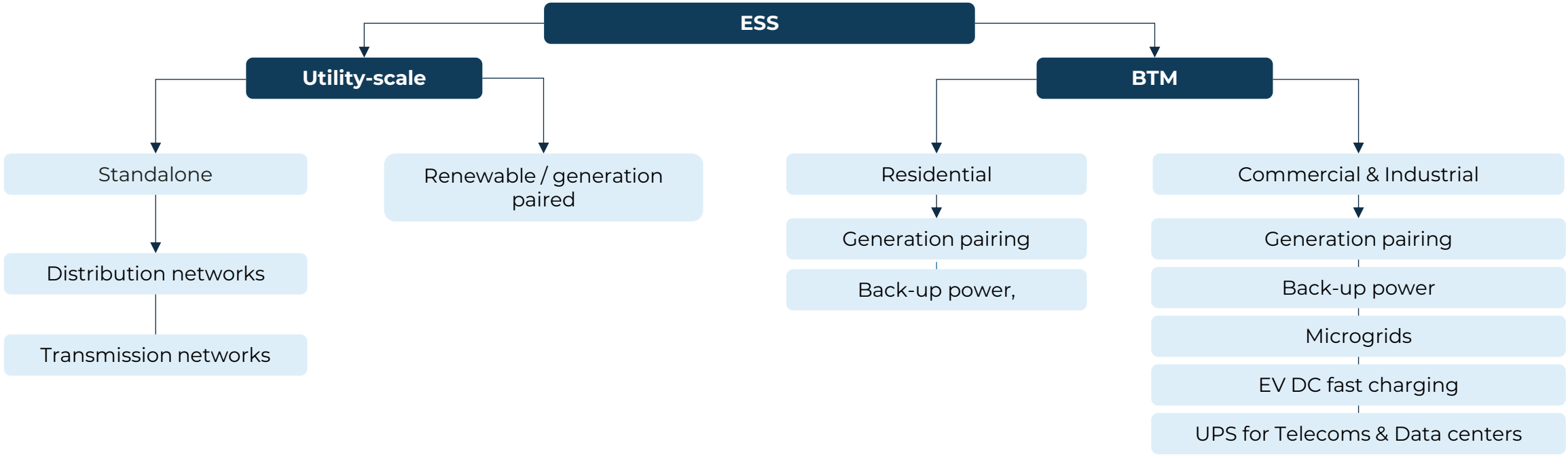
Key terms & glossary

Utility-scale and BTM ESS

- Energy Stationary Storage (ESS) applications can be split into two broad categories, with the BTM market further classified into two broad markets:
- Utility-Scale, storage connected to distribution or transmission networks, or in connection with electricity generation.
- Front-of-the-meter distribution connected (Middle Market), systems 1-20 MW (2-4 MWhs) connected to the distribution grid used for peak shaving, renewable integration, avoided distribution grid upgrades, and grid support.
- Behind the meter (BTM), storage interconnected behind the utility meter of commercial, industrial or residential customers, primarily aiming at electricity bill savings, and energy resiliency.



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