



The CATL battery factory in Debrecen, Hungary. The company has been steadily expanding scale and honing manufacturing technology © Akos Stiller/Bloomberg

Batteries

China's battery makers race to invest abroad to avoid western barriers

CATL and its rivals are creating new global supply chains as protectionist pressures rise

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Chinese companies are building a global supply chain for batteries outside their home market as the west moves to protect itself from a torrent of materials, components and finished cells made in China.

Over the past decade, the world's battery behemoths — including CATL, BYD, Gotion, CALB and Sungrow — along with their suppliers, have spent billions of dollars on their operations in China, expanding their scale and honing their manufacturing technology.

These manufacturers are able to build a gigafactory — the industry term for the plants making cells used in EVs, AI data storage centres and power grid backup systems — in China for about a third of the cost and three times faster than building the same type of facility in Europe.

Despite those advantages, Chinese battery groups have now concluded that the pendulum of global sentiment has swung — perhaps permanently — towards protectionism and localisation, according to multiple industry executives, analysts and foreign government officials. This conclusion is forcing them to accelerate the creation of a complete battery supply chain outside China.

Chinese companies have announced investments of \$12bn across 14 deals outside China this year, according to data from Climate Energy Finance, a Sydney-based research group. That takes investments since 2023 to close to \$90bn — composed of \$52bn in cell manufacturing and \$38bn in materials manufacturing.

Europe is a key destination for Chinese battery companies expanding abroad

Investments since 2023 (\$bn)

□ Battery manufacturing □ Battery materials manufacturing



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Source: Climate Energy Finance

Europe is among the key regions being targeted by Chinese companies, with cell and material investments totalling \$31.5bn since 2023. That figure is second only to investment worth \$35.2bn in south-east Asia in the same period.

In the latest example, Gotion said in late September it would invest more than €1bn in a joint venture with Volkswagen to produce batteries in Spain, Slovakia and Morocco.

In recent weeks Europe has appeared to harden its opposition to Chinese tech exports, pushing Beijing to reduce hybrid EV shipments and warning of further retaliation.

Zhu Lingbo, chief technology officer of the international business unit at CATL, the world's biggest battery maker, said the writing was on the wall even before the EU's new localisation rules that take effect next year were finalised.

“Whatever the regulation orders, CATL has to do localisation of the main components,” Zhu said in an interview at the group's Ningde headquarters. He added that the group is searching for new factory locations and speaking to governments across Europe, looking to add to its existing sites in Germany, Hungary and Spain.

The CATL factory in Germany builds batteries for automakers Porsche and Audi © Nicolo Lanfranchi/Bloomberg
Brussels wants the bloc to fully localise its battery supply chain by the end of the decade, but the European Automobile Manufacturers' Association has warned that more time is needed due to the lack of technological knowhow, battery materials and price competitiveness.

For its plant in Germany, CATL sources just under half its parts in Europe, including some cathode material, to build batteries for Porsche and Audi. But it will become more difficult to find local suppliers as demand for EVs rises.

“We still need to think about how to scale up,” added Matt Shen, CATL’s general manager for Europe, adding that there were also questions about how it can control costs and also generate profit. “Normally you shouldn’t buy everything from outside Europe to produce it — that is not an economic way.”

How fast Chinese companies can localise in overseas markets will also depend on Beijing, said Simon Engelke, founder of Battery Associates, a Dublin-based consultancy group. “Investing abroad and transferring the latest battery technology both require official approval,” he added.

Chinese battery companies are building a global footprint

Overseas investments since 2023 (\$bn), by destination*



Source: Climate Energy Finance • *Includes announced, under-construction, mothballed, operational and postponed projects. Cancelled or divested projects are excluded. Total investment includes only projects with available amounts
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The investments also risk ending up in the crosshairs of foreign regulators. Governments are increasingly scrutinising Chinese investments.

In March, for example, the UK blocked Chinese turbine maker Ming Yang's products from offshore wind farms, citing national security risks. Earlier this month Germany blocked the Chinese acquisition of a logistics group in its biggest seaport.

The sheer scale of the Chinese investment drive raises the spectre of the country's continued dominance over the supply chains that are key to the electricity, transport and AI systems of the future.

And increasingly, companies such as CATL are pushing their own Chinese suppliers to invest in more overseas plants. This complicates the outlook for a US-led push for countries to decouple their economies from a heavy reliance on China and Chinese-controlled companies.

Jiayue Zheng, a Shanghai-based energy storage supply chain analyst with Wood Mackenzie, noted that a number of new entrants — including the likes of failed Swedish company Northvolt — have been trying to challenge China's dominance but face the prospect of "huge" investments with a very long payback period.

China is expected to remain the world's leading producer of battery components over the next decade

Estimated share of global capacity (%), by component

2026 2035

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Source: Wood Mackenzie • *LFP battery = lithium iron phosphate batte

“Even if they know how to make one battery, to make 100 GWh is totally different — how to scale up supply chains and manufacturing, that is really challenging,” she said, referring to the size of the world’s biggest battery factories that are being built in China. “Who will build that kind of capacity? I would say, still the Chinese manufacturers.”

Wood Mackenzie data shows that across the four key building blocks for batteries, Chinese groups’ share of production is higher than 80 per cent. The consultancy’s forecasts also suggest that Chinese companies’ market share for these components will have barely changed by 2034 despite more production moving offshore.

Duo Fu, a China-based battery analyst with consultancy Rystad, said that slowing growth in China is also fuelling the push overseas. There is now excessive supply of EV and energy storage battery-making capacity, compared with near-term demand forecasts. “They need to survive, they need to move overseas,” he said.

CATL shares fell more than 8 per cent in Shenzhen on Thursday after third-quarter results missed forecasts, meaning they have almost halved since early June.

While striving to develop an ex-China battery supply chain, Chinese companies continue to export as much as they can from their domestic factories.

At Sungrow's biggest manufacturing base in Hefei, eastern China, about 90 containers filled with battery energy systems weighing up to 40 tonnes roll off the production lines every day — many destined for overseas markets.

Zhuang Cai, an executive at Sungrow's energy storage business unit, said the Chinese manufacturer has already held talks with leading AI companies in the US about potentially supplying battery systems amid the race to build AI data centres.

"This is a very good opportunity for us to join the establishment of the initial stage with them," Cai told the FT, referring to the build-out of AI data centres.

He noted that Sungrow operates factories in Thailand and India and is building another in Poland, meaning it can "accommodate" requests for batteries built outside China.

While Chinese companies might be able to build out their supply chains in Europe and parts of the developing world, some analysts argue that access to the US — a massive potential market — is clouded with doubt. Beyond high tariffs, Chinese battery makers face the threat of bans amid fears that Chinese-made hardware poses espionage and security threats.

Tim Bush, a Hong Kong-based battery industry analyst at UBS, believed that in the US at least, the "China decoupling story" is "only accelerating".

"Full China battery and electrical equipment supply chain dependence is no more palatable than full Saudi Arabia or Middle East oil dependence was 20, 30 years ago," he said.

"If you're relying on Chinese players for your data centre supply chain or energy storage, utility-scale storage or EV batteries or licensing agreements, it's at your own risk."

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