

## **Reflections from China: Innovation, Scale and the Future of Energy Storage** NextEnergy Capital's Construction & Procurement Team

In a sector moving as quickly as energy storage, there is no substitute for seeing manufacturing capability and innovation firsthand. That's why members of NextEnergy Capital's Construction and Procurement team recently visited key suppliers across China. Read on for reflections on the visit from NextEnergy Capital's Cristina Campo Blanco-Rivera, Dario Hernandez, Hugh Carr-Harris, José Antonio Escobosa Sanchez and Stratos Theodorou.

### **The scale of ambition is striking**

It is one thing to read about China's manufacturing capabilities in a report. It is another to stand on a factory floor and watch fully robotised production lines assembling battery systems at a scale that would have seemed extraordinary just a few years ago. Across every facility we visited, the level of automation, quality control and vertical integration sent a clear signal: the suppliers shaping the global energy transition are investing heavily, and building for the long term.

### **Innovation is outpacing the conversation**

Much of the European industry conversation around battery storage still centres on technologies we have been deploying for several years. What we saw in China suggests that conversation is already behind the curve.

Longer-duration storage is no longer a future concept - it is an engineering priority with commercial products already contracted. Energy density improvements are driving meaningful reductions in balance-of-plant costs. Sodium-ion technology is further along than many in Europe appreciate. For a team responsible for deploying capital across a growing asset portfolio, these are not abstract observations. They have direct implications for how we structure contracts, assess long-term performance risk and future-proof the assets we build today.

We also saw continued progress in DC block design, thermal management systems, battery safety architecture and manufacturing automation, all of which will play an important role in reducing project risk, improving lifecycle performance and supporting safer, more reliable and cost-effective deployment at utility scale.

## **Supply chain resilience as competitive advantage**

The suppliers best positioned for the decade ahead are those with control over the full value chain and the testing infrastructure that independent experts can stand behind. This reinforces our procurement philosophy: building long-term, strategic relationships with a carefully selected group of partners, rather than transactional engagement driven purely by price.

One of the key takeaways from the visit was the importance of distinguishing between technologies that are technically feasible and those that are truly bankable at utility scale. As investors and asset managers, our focus is not only on innovation, but also on manufacturability, quality assurance, long-term performance and supplier bankability.

Framework agreements and robust technical due diligence are how we ensure our portfolio benefits from innovation as it emerges.

## **Looking ahead**

We wanted to extend a sincere thank you to all of the suppliers and their teams who hosted us with such openness throughout the trip. We returned with a sharper view of where the market is heading and a stronger set of relationships to help us get there. Our priorities for the coming years are clear: deepening supplier partnerships, progressing framework agreements across battery storage, solar modules and grid infrastructure, and ensuring our technical due diligence keeps pace with a rapidly evolving landscape. The energy transition is being built at speed and at scale, and we are proud to be leading the charge.