



CASE STUDY

Scaling novel battery tech for India's solar future

LiNa Energy develops novel solid-state **sodium batteries** for **long-duration energy storage**. With support from the Innovating for Transport and Energy Systems (ITES) programme led by Energy Systems Catapult, **LiNa Energy** proved its innovation in real-world conditions and accelerated the commercialisation of its clean energy technology.



A **10 kWh** pilot energy storage project tested in India



£9 million of private investment secured



A manufacturing site built in the UK supporting **30+ high-skilled jobs**

The challenge

LiNa Energy, a UK-based innovator spun out of Lancaster University, was founded to address the limitations of conventional lithium-ion batteries, particularly in emerging markets like India. Its solid-state sodium **technology offers a safer, more sustainable alternative** that is free from critical materials and cooling requirements.

India's abundant solar potential demands reliable, long-duration storage solutions. Without them, grid stability and renewable integration remain constrained. LiNa Energy needed to **demonstrate that its technology could meet these needs**.

However, entering the Indian market posed significant hurdles: unfamiliar regulatory landscapes and limited access to local networks.

The solution

LiNa Energy joined the ITES programme to prepare its offer for the Indian market and connect with local stakeholders. LiNa Energy received tailored support at every stage:

- **Market preparation:** LiNa Energy received tailored mentoring, market research and go-to-market guidance. We helped LiNa Energy develop its pitch deck and refine its value proposition for India's specific energy system needs.
- **Strategic partnerships:** ITES facilitated introductions to key players, including Social Alpha's Clean Energy Innovation Incubation Centre (CEIIC), which helped LiNa Energy navigate the local market and validate its business model.
- **Pilot deployment:** A landmark collaboration with Tata Power enabled LiNa Energy to test its 10 kWh sodium battery energy storage system (BESS) at the Smart Grid Lab in Delhi. The system, built with 1,440 first-generation sodium cells, demonstrated daily solar load-shifting and fast-frequency response.
- **Operational insights:** The pilot was manually assembled at LiNa Energy's UK lab, providing hands-on learning that directly informed the design of a new pilot manufacturing facility in Lancaster.

ITES's whole-systems approach, combining technical, commercial and policy expertise, helped LiNa Energy enter the Indian market with confidence.



The impact

LiNa Energy's pilot with Tata Power **proved the commercial and technical viability** of its technology. The demonstration showed costs at both cell and system levels could be halved, **validating the innovation** in a live operational environment.

The successful pilot gave investors confidence, helping LiNa Energy secure more than **£9 million in private investment**, enabling the launch of a **megawatt-scale manufacturing site** in North West England. The company now supports **30+ high-skilled jobs** and is positioned to meet India's growing demand for safe, long-duration energy storage.

The collaboration with Tata Power represents a breakthrough UK-India partnership, showcasing how bilateral innovation can unlock scalable, sustainable solutions.

Will Tope, CEO of LiNa Energy, said: *"This collaboration has been instrumental in shaping our approach to commercialisation in the UK. Through ITES and our work with the Catapult, we've been able to validate our technology in real-world conditions and build confidence in scaling manufacturing locally. It's played an important role in our decision to invest in UK-based production and job creation as we move towards deployment."*

How can we help you?

LiNa Energy's journey shows what's possible when innovative technology is backed by the right expertise, partnerships and real-world testing. If you're developing a clean energy innovation, we can help you test, refine and scale it.

If you would like to explore how we can help test, refine, and scale your innovation, get in touch:

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