FINULENT SOLUTIONS

PEAK & TROUGH

Inside the UK's battery storage challenge in 2026

READ INSIDE:

- The curtailment problem
- Storage as a strategy
- A shuffle in BESS revenues
- The retrofit question
- Solar cannibalising its value?
- For the projects eyeing 2030

Solar conversation in the UK was straightforward for a long time. Build more, build faster, add gigawatts, and hit targets. The policy framework was set up around deployment and sure enough the industry responded. Solar capacity grew with numbers climbing higher each year.

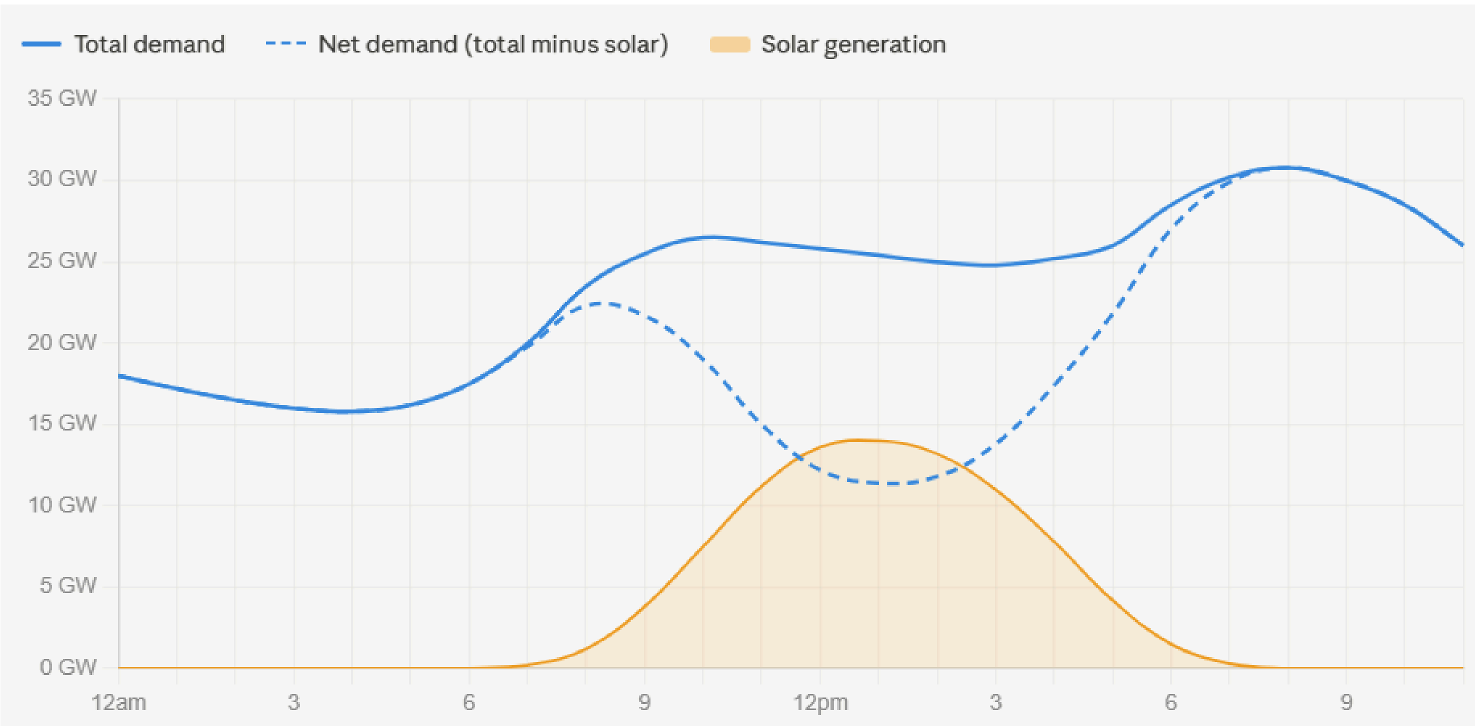
But we face a different problem today. And developers feel it in ways that are impossible to ignore.

The constraint is no longer generation capability but the ability of the system to absorb and efficiently use that power when and where it's produced.

THE CURTAILMENT PROBLEM

Curtailment in Great Britain jumped 22% year-on-year in 2025. 10 TWh of wasted clean power. That's enough electricity to power every household in London for a year.

This problem is straightforward to diagnose. It's what grid operators call the duck curve. Solar generates at its peak around midday on clear days, exactly when demand's softer. So a deep trough in net demand followed by a sharp evening ramp as the sun drops.



UK wholesale prices dropped below zero on 1st April this year. For extended periods even as generation records were broken. Negative pricing hours may double again to over 1,000 by 2027 if capacity keeps growing ahead of network upgrades.

STORAGE AS A STRATEGY

Great Britain is now second in Europe for co-located solar and attractive storage investments. Grid access is one big driver here. We're looking at 550 GW of renewables and storage capacity queuing for grid connections and a backlog running to 2035 for new BESS assets.

Co-locating storage with solar is increasingly the only viable route to energisation before the decade ends.

Moving the needle

- *Connection*: Single shared connection bypassed double-queuing. Potentially saving 4 yrs on project timelines.

- *Curtailment: Battery absorbs generation during grid constraint periods. And developers can accept tighter export caps in exchange for earlier connection dates.*

- *Capture price: Storage shifts dispatch away from peak-generation midday hours (when prices go negative) to the higher-value evening ramp.*

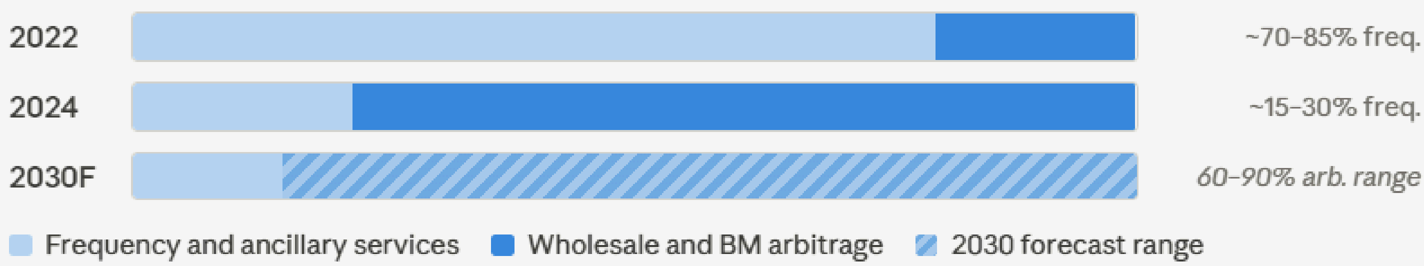
- *Revenue stack: Battery participates in energy arbitrage (charging the battery when wholesale prices are low, dispatching when they spike), and balancing mechanism.*

Battery costs have fallen dramatically over the past decade. Projects that wouldn't have worked financially even five years ago are viable now. Developers planning solar-only assets rethink the build from the ground up.

A SHUFFLE IN BESS REVENUES

This one's been significant over the past three years. And understanding the direction of travel matters quite a lot.

Strategic trend illustration. Revenue mix varies by asset duration, location, and optimizer strategy.



Estimated midpoints from Cornwall Insight and Modo Energy. Capacity Market revenues excluded — though CM payments underpin many project finance structures as a contracted floor. 2030 range is scenario-dependent, not a consensus forecast.

Arbitrage has grown but it hasn't replaced everything else–

- Quick Reserve spiked to around 20% of revenues in early 2025
- Reserve services rebounded in parts of 2026
- Some months remain BM-heavy, others wholesale-heavy

THE RETROFIT QUESTION

Retrofitting storage to an operational site is appealing. And it comes up in every conversation on existing solar assets. Though in practice there are some structural problems in the way:

Import capability often absent

Many operational sites were built with export-only connections sized tightly to generation capacity. Without importing capability, charging the grid in a low-price window (the big portion of arbitrage value) has some constraints.

Some sites can be tweaked without full re-engineering, but many cannot without a significant connection upgrade.

A second round of permits

Renegotiating the connection agreement to add storage is a process that can take years. And carries no guarantee of a favourable outcome.

DNOs and NESO may need to reassess network impact, protection requirements, and import limits before approving storage under an existing agreement. This process can run to months or years. And the outcome's not guaranteed.

The economics of retrofitting often look better in a model than on a site. The ideal step is to design-in storage from the outset.

SOLAR CANNIBALISING ITS VALUE?

The more solar capacity the UK adds, the more it could undermine its economics. Modo Energy tracks the capture rate–

85%

Solar capture rate in 2026

58%

Forecast capture rate by 2035

A 27% decline in capture rate over nine years isn't a tail risk. And it falls hard on solar-only projects in a crowded midday market.

Storage more than "adds" revenue to a solar project. It protects the revenue that solar would otherwise erode.

FOR THE PROJECTS EYEING 2030

45 GW

UK solar capacity target by 2030

27 GW

Battery storage needed to support it

The UK needs 23-27 GW of battery storage by 2030, roughly four times what's currently installed. Naturally a solar project without storage is increasingly being treated as an incomplete one. In practice even – in how lenders assess risk, how grid connection's prioritized, and how revenue holds up in the long run.

It's also why BESS integration sits at the heart of what we do at Finulent. Helping developers get from concept to a compliant system – is some of the work we care about most.

FINUSHOTS

Read more

Read more

Follow Us : Finulent Solutions | finulentsolutions | Finulent Solutions

Contact Us : +44 7961627865 | +1 860 880 1115 | +91 9867650526