

A wide-angle photograph of the Hill Farm battery facility, showing rows of white Tesla battery cabinets with red accents and 'TESLA' branding, arranged in a large, well-lit industrial space with a high ceiling and large windows.

Open Energi deliver the highest returns for Zenobē

Grid Scale Battery: Hill Farm

Summary

In August 2019, Open Energi began to help Zenobē to maximise the energy trading revenues from their 10MW battery across ancillary grid services and wholesale markets.

We implemented our AI solution, Dynamic Demand, making Hill Farm one of the first UK battery sites to fully automate both grid services and trading on the same technology platform.

Dynamic Demand combines automated bidding and dispatch of flexibility in Dynamic Containment (DC), the Balancing Mechanism (BM), the Capacity Market and Triads with intraday and day-ahead energy trading markets. It continuously monitors and tunes the battery to optimise performance whilst avoiding degradation.

Zenobē is now benefitting from impressive revenues, thanks to the platform's cutting-edge algorithmic AI, business intelligence and automated trading.

The results

- In 2021, it generated the highest returns for a battery of its size in the UK (Modo)
- It consistently outperforms benchmark averages across the UK storage market
- Started trading in the Balancing Mechanism in April 2021 and was one of the first battery sites to successfully stack BM actions with DC
- In September 2021, it was the top-performing battery of its size despite unprecedented wholesale prices and changes in the DC market
- Battery cycling has been minimised to below one cycle per day, within warranty limits, despite significant volatility and the stacking of different actions.

Asset:



10.250MW/12MWh
Tesla (Lithium-ion)
battery

Services:



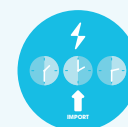
Energy Trading



Balancing Mechanism



Dynamic Containment



Triad



Capacity Market

The solution

At Hill Farm, Open Energi have implemented our Dynamic Demand solution, which delivers fully automated optimisation, bidding, and dispatch.

The platform seamlessly stacks and switches between different markets including Low and High DC, Dynamic FFR, Day-ahead and Intraday, the BM and Triads – maximising the benefit from each and minimising downtime.

Dynamic Demand is powered by AI to automatically analyse trading decisions across multiple time horizons, recommending the trades that generate the best revenues for Zenobē.

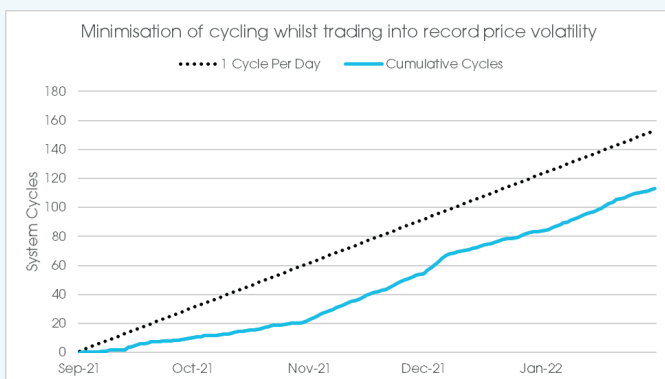
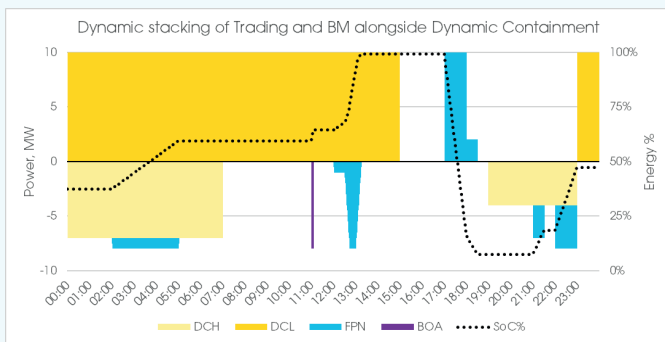
Real-time state of charge information from the battery is combined with ancillary grid services insights and wholesale day-ahead and intraday market forecasts.

Zenobē also retains manual dispatch rights, including uploading their triad dispatch schedules. Once approved, Dynamic Demand activates trades and automatically adjusts the battery's state.

Throughout the process, our patented State of Charge management works continuously to reduce throughput and re-balance the battery within its optimum state of charge and warranty constraints, utilising a unique combination of cloud and edge control technology.

Key Outcomes

- **Top 3 performing asset** in 2021 delivering **£157k/MW** in value (Modo)
- **Minimised cycling and throughput below one cycle a day**
- **Delivered 7,600 hours** of Dynamic Containment across 2021.



How can Open Energi help you?

Open Energi is the trusted global partner to maximise returns for investors and owners of battery storage and low carbon technologies. We use pioneering AI automation and market-leading State of Charge management to trade and optimise energy flexibility across any energy market or service.

Talk to us about how we can help you maximise your returns.

Customer testimonial

“We are delighted to be working with Open Energi, whose forecasting capabilities and track record in the market are reflected in the quality of their platform. The Dynamic Demand 2.0 platform and Open Energi’s forecasting functionality complements our capabilities as an asset owner and operator and allows us to improve the performance of this project in the challenging UK grid-scale storage market”.

James Basden,
Co-founder and Director, Zenobē



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