

Investors Need Clarity on Battery Storage Revenue Models

Media Mentions

August 08, 2023 | ICIS | 3 minute read | London

Battery storage funding is expected to grow by 2030 but investors need clarity on different revenue models for the technology to boost investment, sources told ICIS.

Battery energy storage systems (BESS) stack revenue streams offering arbitrage, capacity and ancillary services under regulated frameworks, long-term offtake agreements and merchant schemes, said rating agency Fitch Ratings in its latest “What Investors Want to Know: Project Financed BESS” report.

Unlike renewable projects, BESS normally tend to accumulate various revenue streams in combination, or “stacked”, including the wholesale market.

These are usually: supplying ancillary services to electricity system operators (which may be long-term contracts), capacity market revenues (which can be for up to 15 years) and arbitrage: charging and storing electricity at low prices while discharging at higher prices to earn a margin on the price differential.

“For investors willing to leverage opportunities on the arbitrage market, this is beneficial. Arbitrage is not usually the majority of the revenue, however the market could evolve in the direction of structures using more arbitrage,” Antoine Pavageau, associate director in the infrastructure team at Fitch Ratings told ICIS.

Market sources have previously told ICIS long-term revenue stability is crucial for securing investment in BESS.

“We need more clarity and information on various revenue models for BESS to push funding,” a European investor told ICIS.

Related People

Ronen

Partner

LONDON

+44 (0) 20 7448 4213

ro.lazarovitch@bracewell.com

Related Industries

[Energy](#)

[Finance](#)

Related Practices

[Finance](#)

[Project Finance](#)

[Renewable Energy](#)

[Energy Storage](#)

Participation in the UK capacity market offers secure revenue that can be stacked on top of the more profitable ancillary/wholesale combination, added a second source.

“There are two elements when we as lawyers are talking to the investors when discussing battery storage – one is the regulatory side and contractual side of things where the pricing will come from the financial advisor’s side,”

Ro Lazarovitch, partner at law firm Bracewell, told ICIS.

“Investors are focussed on both – the reason for that is that contractual and regulatory sides have come up into a lot more focus in recent years because there is an obsession about planning permission and grid connection, which should have been administrative matters. These days it takes so much time and if you are applying for a grid connection today, you might be told you will get it in six years causing a lot of frustration and time to developers,” added Lazarovitch.

The Bracewell lawyer said that feeds into the contractual basis as developers want as much certainty as they can around pricing and construction risk and we are trying to advise them how best to manage that risk, but obviously in an inflationary environment that remains a challenge.

“The other side of the equation is pricing volatility and I think a lot of developers refine their expectations and modelling of the electricity market and pricing as they get close to the ready-to-build stage of the project,” added Lazarovitch.

German Example

In Germany, energy storage asset owners can collaborate with the country’s four grid operators to provide a primary ancillary service known as Frequency Control Reserve (FCR).

Germany’s FCR price has traditionally tracked the price of natural gas because of the heavy component of gas-fired generation in the service, sources told ICIS.

This caused FCR prices to reach unprecedented highs during the summer of 2022, before dropping rapidly in 2023.

However, the secondary service automatic Frequency Restoration Reserve (aFRR), also known as Secondary Control Reserve, provides revenues more specifically to battery storage projects because of a reduction in delivery times from four hours for FRC to 15 minutes.

This service aims to support FCR by maintaining a reserve in the power grid to stabilise grid frequency in case FCR falls short of meeting flexibility requirements.

Article originally published in ICIS European Daily Electricity Markets on August 8, 2023.