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Utility-scale non-battery offshore energy storage



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De Challenge

Energy from offshore windfarms often doesn't match consumption, leading to curtailment or low prices during high availability, reducing offshore wind farms revenues and making new projects unbankable. As more windfarms are built, this problem will grow. The solution is offshore energy storage, but no suitable and cost-effective technology currently exists. Competing options like marinized batteries have higher environmental risks, low circularity, shorter lifespans, and require frequent replacements.

De Solution

FLASC offers the first energy storage solution tailored for offshore wind, using a hydro-pneumatic liquid piston to compress air. New Open-Gas Cycle improves energy density and efficiency, with no sea-water used. The marine environment acts as a heatsink, optimizing efficiency, making our system cost-competitive with land-based storage. By co-locating FLASC systems with offshore wind farms, grid flexibility is enhanced, adding 10-30% more value to wind farm output. Backed by international patents, the technology has received a Statement of Feasibility from DNV and funding from the prestigious EIC Accelerator.



De Businesscase

With a co-located FLASC system, offshore wind farms can become an active provider of grid flexibility when using energy storage. Recent studies show that this can add 10-30% more value to the wind farm output by improving the way it is monetised. This results are based on business case calculation on 26 UK wind farms with Siemens Energy.