De-risk and protect your BESS from the very start with Digital Commissioning and In-Life Analytics

TWAICE

Introduction

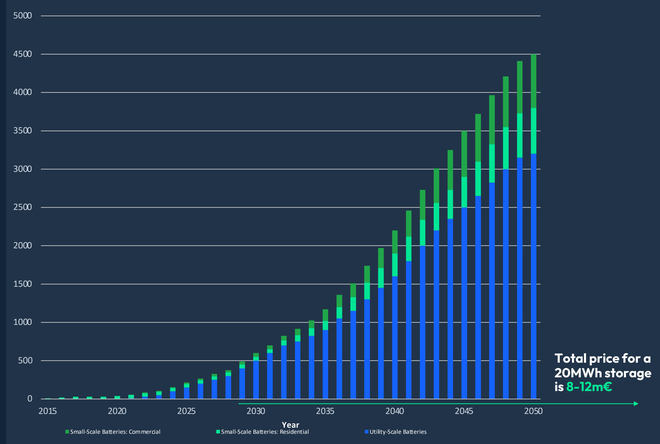
Battery energy storage systems (BESS) are gaining popularity as a way to store excess energy from renewable sources and improve the efficiency of the electric grid. However, BESS deployment and operations can be risky.

This poster is tailored for asset owners, operators, and individuals interested in BESS deployment and operations. With industry insights and real-world case studies, the discussion will offer practical knowledge and strategies to de-risk the deployment and operations of BESS and provide answers to the following questions

•How Digital Commissioning can help asset owners ensure maximum availability of their BESS during the critical initial years of operation, laying the groundwork for a successful, reliable and profitable business.
•The benefits of in-life analytics, which enable continuous monitoring and optimization of BESS performance throughout an asset's entire lifetime enabled by TWAICE's health, safety and warranty solutions

Current trends: Growing ESS market & Larger Storages

Millions of dollars are invested in energy storage systems



Low-tech and hardware tests are not sufficiently scalable to provide insights

Risks: BESS Systems are exposed to there main risks

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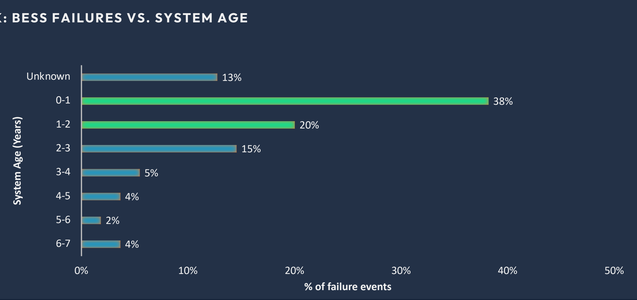
Risks #1

Most failures occur in the first two years of operation



Risks #2

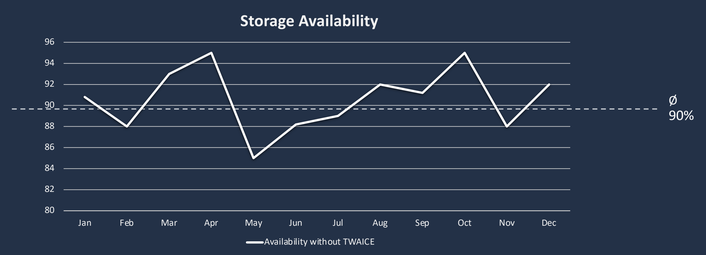
BESS availability is low on average

Storage availability in UK in 2022 was 82%

- Modo Energy

"Unplanned downtime led to an average availability across our fleet of only 84% last year"

- US asset owner

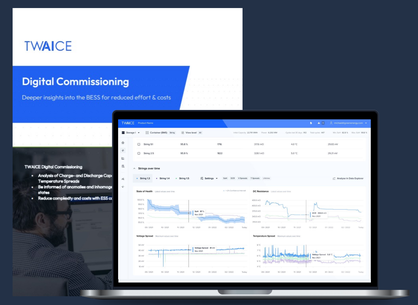


Risks #3

Battery failures that lead to fires can mean high reputational damage

Solution: TWAICE Commissioning and In-life analytics

We help to avoid exposure to the outliers!



Step 1:
Digital Commissioning

✓ Find errors that cannot be identified with on-site commissioning

✓ Exchange faulty modules before operation

✓ Provide transparency to asset owner

Step 2:
In-Life Analytics

✓Detect & Fix anomalies early

✓ Indentify trends over storage lifetime

✓ Increase BESS availability

Benefit #1

Every party involved: Get a complete view on the battery

Construction

EPC

Improve your service offering

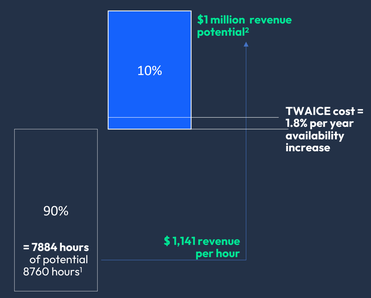
Operation

Asset Owner

Make sure you get what you paid for

Benefit #2

Increase availability



Benefit #3

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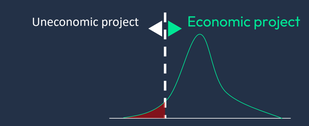
Project NPV – Without TWAICE



Project NPV – With TWAICE