

ACCURE Releases 2025 Energy Storage System Health & Performance Report

Best-in-class systems achieve >88% efficiency and strong reliability — yet 1 in 5 projects faces reduced returns from technical underperformance

AACHEN, NORTH RHINE-WESTPHALIA, GERMANY, September 9, 2025

/EINPresswire.com/ -- [ACCURE Battery Intelligence](#), the world's leading independent battery analytics company, today released its [2025 Energy Storage System Health & Performance Report](#) — the first

comprehensive analysis of operating data from more than 100 grid-scale battery energy storage systems (BESS) spanning 18+ GWh of capacity worldwide. The report offers the most comprehensive view yet into how these critical grid assets perform in the real world, from best to worst.

“

Investors and operators deserve better than guesswork. Independent analytics turn hidden faults into actionable insights — protecting revenues and building long-term confidence in storage.”

*Dr. Kai-Philipp Kairies,
ACCURE CEO and Co-founder*

With battery energy storage rapidly becoming a cornerstone of the global energy transition, ACCURE's report finds that this power market sector still faces significant operational and financial risks. Drawing on the world's largest independent battery monitoring database, the report recognizes common challenges, identifies high-performance benchmarks achieved by projects that use best practices and advanced technology, and shows where other BESS assets fall short, impacting safety, performance, reliability and financial returns.



An energy storage system helping to power the grid.

Top Findings:

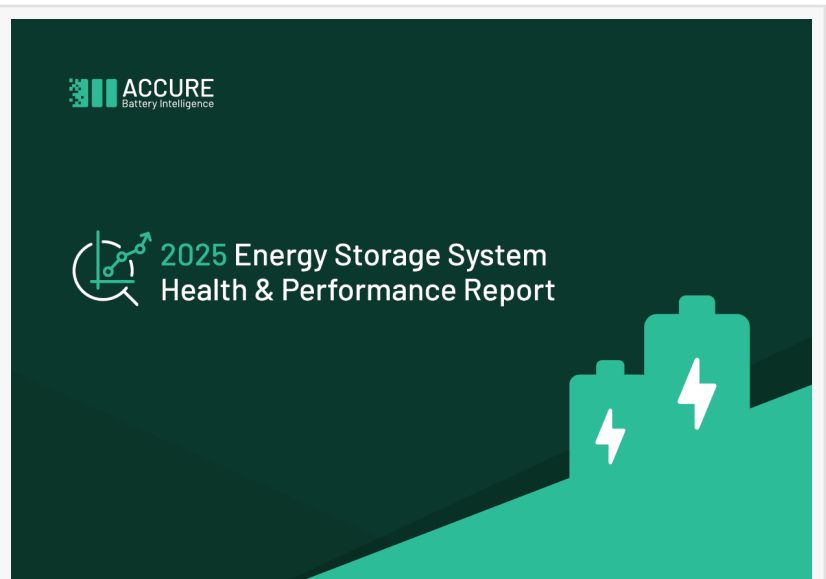
- 19% of BESS hardware components caused operational problems — such as hardware components repeatedly tripping, large imbalances that reduce energy output, and recurring safety alerts that have a direct impact on revenue and reliability.
- Best-in-class systems reached round-trip efficiencies above 88%, representing more than a

third of projects studied. Efficiency declines of even 1–2% translate into millions in lost revenues over a project's lifespan.

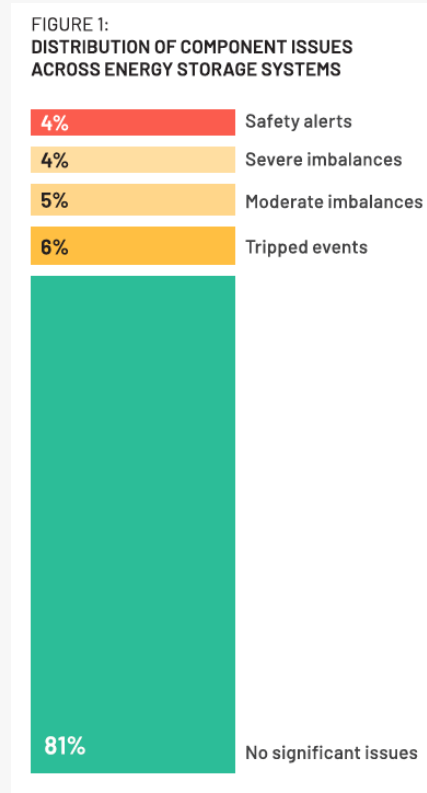
- Most projects oversized their systems by 15–25%, but under- and over-sizing capacity carries financial risks, especially if not aligned with long-term augmentation strategies.
- Only 83% of projects met or exceeded nameplate capacity during Site Acceptance Testing (SAT), underscoring the importance of using best practices and independent oversight earlier in the design, procurement, and commissioning processes.
- Commissioning delays remain widespread, with 1–2 month delays the norm, and a minority of projects missing their online dates by as much as nine months. Delays defer revenue and strain investor confidence.
- Battery SOC estimation errors of $\pm 15\%$ are common in LFP systems, but projects that use advanced analytics can reduce these errors to $\pm 2\%$, unlocking greater trading flexibility and improved returns.
- 20% of systems only collect low-quality data, compromising reliability and asset value over time.

"Investors and operators deserve better than guesswork. Independent analytics turn hidden faults into actionable insights — protecting revenues and building long-term confidence in storage," said Dr. Kai-Philipp Kairies, ACCURE CEO and Co-founder.

"This report arms asset owners, operators, and investors with the insights they need to adopt best practices and technology, identify risks early, optimize operations, and hold vendors accountable."



The 2025 Energy Storage Health and Performance Report is the first comprehensive analysis of operating data from more than 100 grid-scale battery energy storage systems (BESS) spanning 18+ GWh of capacity worldwide



Distribution of component issues across energy storage systems

The report's findings make clear that while most BESS projects perform reliably, the industry has significant room for improvement. Independent, data-driven monitoring emerges as a crucial tool for mitigating risks, protecting revenues, and building investor confidence in long-term BESS performance.

About the Report

The 2025 Energy Storage System Health & Performance Report analyzes time-series operational data from more than 100 commercially operating BESS projects worldwide over 10 MWh in size, with more than half the projects exceeding 100 MWh. To protect customer confidentiality, analyses were anonymized across subsets of 30–60 sites, ensuring statistical robustness, without exposing individual project performance. The full report is available for download at www.accure.net.

About ACCURE Battery Intelligence

ACCURE helps companies reduce risk, improve performance, and maximize the business value of battery energy storage. Our predictive analytics solution simplifies the complexity of battery data to make batteries safer, more reliable, and more sustainable. By combining cutting-edge artificial intelligence with deep expert knowledge of batteries, we bring a new level of clarity to energy storage. Today, we support customers worldwide, helping optimize the performance and safety of their battery systems.

Matt Besch

ACCURE Battery Intelligence

+1 252-732-5888

[email us here](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/847252605>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.