

PROJECT

ENERGETIC

Next generation battery management system based on data rich digital twin

ENERGETIC aims at developing the next generation BMS for optimizing batteries' systems utilisation in the first (transport) and the second life (stationary) in a path towards more reliable, powerful, and safer operations.



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14

PARTNERS

7

COUNTRIES

€4M

TOTAL BUDGET

39

MONTHS



energetic

IN ONE CLICK

Coordinator	Programme	Period
INSA Strasbourg	HORIZON	2023 - 2026
Sector	Web	
Energy, batteries	https://energeticproject.eu/	

01 Challenge

The push for cost-effective energy storage is vital for meeting European Green Deal objectives, reinforcing electricity supply security and grid flexibility, and allowing higher renewable energy penetration. The use of second-life batteries for stationary energy storage is growing, extending battery life up to 10-15 years. However, Battery Management Systems (BMS) face challenges in accurately assessing battery health and safety due to limited real-time data and processing capabilities. Integrating technologies like AI holds promise for better battery lifecycle management, but precise state estimate remains a significant hurdle.

02 Solution

ENERGETIC aims to develop the next generation BMS for optimizing batteries' systems utilisation in the first (transport) and the second life (stationary), enhancing reliability, power, and safety. The project contributes to translational enhanced sensing technologies, exploiting multiple AI models, supported by Edge and Cloud computing. ENERGETIC's vision includes monitoring battery health and predicting remaining lifespan with digital twin technology, as well as diagnosing degradation factors through explainable AI models.

03 Impacts

ENERGETIC will have significant scientific, economic and societal impacts. Through high-quality research contributions, it aims to advance knowledge in battery management, fostering open science and enhancing human capital. It stimulates innovation, creating jobs and market opportunities. Also, it influences EU policies by recommending predictive maintenance measures and fosters engagement with end-users, facilitating the uptake of innovation for a more sustainable future.