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EIC INNOVATION PROCUREMENT PROGRAMME

NESS

(Next-generation Electric Storage System)

case study



KASI TECHNOLOGIES

with the support of

5FAIV

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PILOT: Kasi Technologies AB & FAIV

NESS (Next-generation Electric Storage System) | Commercial Fleet Transport and Automotive Electrification

TRL 8	100% BLOCK	EXTENDED	LOWER TCO
COMMERCIAL MATURITY LEVEL	**COMPONENTS COMPLETED**	**VEHICLE OPERATING RANGE**	**REDUCED OVERALL COST**
System advanced to full vehicle integration and test-drive readiness	Hardware power electronics blocks fully manufactured and validated	Optimizes battery energy delivery to increase delivery van range	Extends battery lifespan to delay expensive vehicle replacements

PILOT PROFILE

EIC Awardee: Kasi Technologies AB
Solution: NESS (Next-generation Electric Storage System)
Partner: FAIV (Vehicles & Fleet Operator, Sweden)
Testing Ground: Fleet test track and real-world commercial vehicle operating environments in Sweden
Sector & Challenge Focus: Commercial Fleet Transport and Automotive Electrification

The Challenge

Commercial fleet operators managing delivery vans and light transport vehicles face high costs when switching to electric vehicles. Standard vehicle batteries degrade quickly under heavy daily commercial use, resulting in reduced driving range, long charging downtime, and expensive premature battery replacements that harm fleet profitability.

The Solution

NESS is a modular retrofit energy storage and smart power electronics upgrade package. Installed into existing commercial vehicles, NESS manages electrical current flow intelligently, protecting battery cells from heavy stress, extending driving range, and prolonging overall battery operational lifespan.

Objectives

The pilot aimed to integrate NESS components into live test vehicles, verify power electronics stability, and evaluate range improvements under daily fleet driving conditions. FAIV wanted to confirm system maturity before retrofitting commercial vehicle fleets.

Constrains

The engineering team had to connect NESS power electronics into vehicle computer communication wiring (Controller Area Network wiring) without triggering vehicle dashboard error alerts, while meeting automotive safety rules.

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Performance

The pilot advanced technology maturity from Technology Readiness Level 7 to Technology Readiness Level 8. The upgraded test vehicle performed successfully in live test drives, demonstrating power electronics stability and proves that retrofitting existing vehicles can extend operating life and reduce total cost of ownership.

Partner Operational Improvements

Extended vehicle lifespan, lower battery degradation costs, and reduced total cost of commercial fleet ownership.

SUCCESSFUL PILOT VALIDATION

FAIV and Kasi Technologies established a co-marketing agreement and phased commercial rollout plan to supply retrofit power packages to commercial transport fleets.

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