



# Shaping Europe's energy future with sustainable, safe, and scalable Sodium-Ion Batteries



18 partners



11 countries



6.9M EU-funds



2025-2028



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## SPRINT OBJECTIVE

As renewable energy grows, so does the need for safe, sustainable, and affordable energy storage. SPRINT is developing next-generation sodium-ion batteries - a safer, more sustainable, and cost-effective alternative to today's lithium-ion technology. With the support of 18 partners across Europe, SPRINT is scaling up quasi-solid-state technology using abundant, non-toxic materials, providing real-world demonstrations and a clear path to commercialisation.

## SPRINT INNOVATIONS

- **Optimised NFP cathode** materials developed through novel synthesis methods.
- **Hard-carbon anodes** derived from forest residues in Northern Europe.
- **Quasi-solid-state polymer and polymer composite electrolytes** with solvent-free synthesis, offering a safer alternative to flammable liquid electrolytes.
- Strategic **interface optimisations** to enhance cycle life.
- **Dry electrode processing** (incl. PFAS-free binders) to improve the environmental footprint of battery manufacturing.

## EXPECTED RESULTS

- ✓ Cost reduction to **0.04€/kWh/cycle**.
- ✓ Increased energy density (**>200 Wh/kg & >420 Wh/L**).
- ✓ High power capability (**>500 W/kg**).
- ✓ Extended cycle life (**>5,000 cycles**).
- ✓ Enhanced safety through a **leak-free, non-flammable** design.



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