Sodium-ion batteries in Europe, cost and adoption outlook 2025

Velstrand Research, proprietary research. Topic: sodium-ion. Region: Europe. Period: 2025-2030.

Executive summary

Sodium-ion cells cost 87.4 USD per kWh in 2025, 21.6% more than LFP cells.

We expect sodium-ion to become cheaper than LFP by 2030, at 52.3 USD per kWh, and to reach 41.2% of new two-wheeler batteries in Europe.

Cell cost comparison

Average cell cost by chemistry, USD per kWh, 2025 actual and 2030 forecast.

Chemistry	Cost 2025 (USD/kWh)	Cost 2030 (USD/kWh)
Sodium-ion	87.4	52.3
LFP	71.9	58.8
NMC	98.6	79.4

Adoption forecast by segment, 2030

Forecast share of sodium-ion in new battery demand in Europe by segment, 2030.

Segment	Sodium-ion share 2030 (%)
Two-wheelers	41.2
Stationary storage	23.6
Entry-level electric cars	9.7
Light commercial vans	6.4

Methodology

Cell costs are bottom-up estimates built from material prices, plant throughput and yield assumptions validated with 8 cell manufacturers.

Adoption forecasts combine announced supply agreements with a demand model calibrated on 36 product launches.